HIV EPIDEMIOLOGY

Annual Report 2021

San Francisco

Department of Public Health
Population Health Division

HIV Epidemiology

Annual Report **2021**

San Francisco Department of Public Health
Population Health Division

HIV Epidemiology Section

August 2022

The HIV Epidemiology Annual Report is published by the HIV Epidemiology Section. To obtain a free copy of the report, please contact:

San Francisco Department of Public Health
HIV Epidemiology Section
25 Van Ness Avenue, Suite 500
San Francisco, CA 94102 USA

Phone (628) 217-6335
Fax (415) 431-0353

The HIV Epidemiology Annual Report 2021 is available on the internet at:
https://www.sfdph.org/dph/comupg/oprograms/HIVepiSec/HIVepiSecReports.asp

Acknowledgments

This report was prepared by the Applied Research, Community Health Epidemiology, and Surveillance Branch's HIV Epidemiology Section staff members. We thank our colleagues in the Center for Public Health Research Branch, Disease Prevention and Control Branch, Community Health Equity and Promotion Branch, San Francisco AIDS Foundation, and the San Francisco STOP AIDS Project for providing data and critical input in this report.

In addition, we acknowledge the important contribution of people with HIV, HIV health care providers, community groups, researchers, and members of the community. Publication of this report was made possible because of their cooperation, dedication, and hard work.

San Francisco Department of Public Health

Director of Health	Grant Colfax, MD
Health Officer and Director of Population Health Division	Susan Philip, MD, MPH
Deputy Director of Population Health Division	Daisy Aguallo, MS-HCA

Applied Research, Community Health Epidemiology, and Surveillance (ARCHES) Branch

Director	Wayne Enanoria, PhD, MPH*
Director of HIV Surveillance and Epidemiology	Ling Hsu, MPH
Program Coordinators	Viva Delgado, MPH Wiley Kornbluh, MPH* Patrick Norton, PhD, MA Qianya Vinson, MFA*
Supervising Epidemiologist	Sharon Pipkin, MPH
Epidemiologists	Miao-Jung Mia Chen, PhD, MPH Jennie CS Chin, MBA Elise Mara, MPH Jason Melo, MPH Vani Nimbal, MPH, BSN Linda Phan, MPH
Staff	Kimberly Alvarado* Chloe De Guzman Aida Flandez Oliver Harrison Jr. Vivian Huang Bella Jackson Sophia Raynor Rufina San Juan Amber Soublet* Belinda Van
Consultants/Researchers	Nancy Hessol, MSPH Alison Hughes, PhD, MPH Susan Scheer, PhD, MPH

(In alphabetic order by last name)
* Staff no longer working in ARCHES Branch as of August 2022.

Contents

List of Figures and Tables

Special Section: HIV Testing During the COVID-19 (SARS CoV-2) Pandemic

1. Overview of HIV in San Francisco

5. Trends in HIV Mortality

6. Health Insurance Status at Time of HIV Diagnosis

A Abbreviations

API	Asian/Pacific Islander
ART	Antiretroviral therapy
CDC	Centers for Disease Control and Prevention
HCV	Hepatitis C virus
LINCS	Linkage Integration Navigation Comprehensive Service
MMP	Medical Monitoring Project
MSM	Men who have sex with men
MSM-PWID	Men who have sex with men and who also inject drugs
NDI	National Death Index
NHBS	National HIV Behavioral Surveillance
OOJ	Out-of-jurisdiction
PEH	People experiencing homelessness
PLWH	People living with HIV
PrEP	Pre-exposure prophylaxis
PWID	People who inject drugs
SFDPH	San Francisco Department of Public Health
SRO	Single-room occupancy
STI	Sexually transmitted infection
TDR	Transmitted drug resistance
TWSM	Trans women who have sex with men
TWSM-PWID	Trans women who have sex with men and who also inject drugs

Executive Summary

Last year the 2020 HIV Epidemiology Report documented the disruption in HIV testing and care due to COVID-19. While the impact of COVID-19 continues, this 2021 report shows recovery in some areas back to levels seen prior to COVID-19. In particular, HIV testing in medical sites has returned to levels consistently higher than 2019 levels (Figure S.1). In addition, in 2021, linkage to care within one month of diagnosis is back to 94%, up from 92% in 2020 and comparable to 95% linked to care within one month in 2019 (Figure 3.1).

Nevertheless in some areas, the impact of COVID-19 is still observed. HIV testing at community sites has not returned to the numbers seen prior to COVID-19 (Figure S.2). HIV viral load tests, an indicator of HIV care, were consistently lower than the 2019 level (Figure S.4). In addition, among people diagnosed with HIV between January and September 2021, 75% were virally suppressed within 6 months of diagnosis, the same proportion as in 2020 but still behind the 79% virally suppressed within 6 months in 2019 (Figure 3.1).

In 2021, 160 new diagnoses were reported; an increase of 16% from 2020 when 138 diagnoses were reported but still lower than the 173 new diagnoses reported in 2019 (Figure 1.2). This fluctuation may be due to several factors. For example, this may reflect an actual increase in new diagnoses that resulted from an increase in transmission in 2021 compared to 2020. Alternatively, it may be a result of delayed testing whereby some people infected in 2020 delayed testing until 2021.

Persistent disparities in new diagnoses and HIV care indicators were observed among people experiencing homelessness. The proportion of new diagnoses among people experiencing homelessness has increased in the last decade; accounting for a high of 24% in 2021 (Figure 14.1). Additionally, people experiencing homelessness who were diagnosed in 2020 were less likely than people who were housed to have timely linkage to care and viral suppression (Table 3.2).

Also of concern, overall deaths among people diagnosed with HIV have been increasing. This increase is driven by deaths due to non-HIV related causes which accounted for 73% of deaths in 2020 (Table 5.1). For the first time, accidental deaths, which include drug overdoses, surpassed non-AIDS cancers as the second most frequent underlying cause of death in 2017-2020 (Table 5.3). The percentage of deaths due to drug overdoses increased from 11.1% in 2009-2012 to 15.0% in 2017-2020. This trend aligns with the increased number of deaths from drug overdoses documented citywide particularly during the early months of the COVID-19 pandemic.

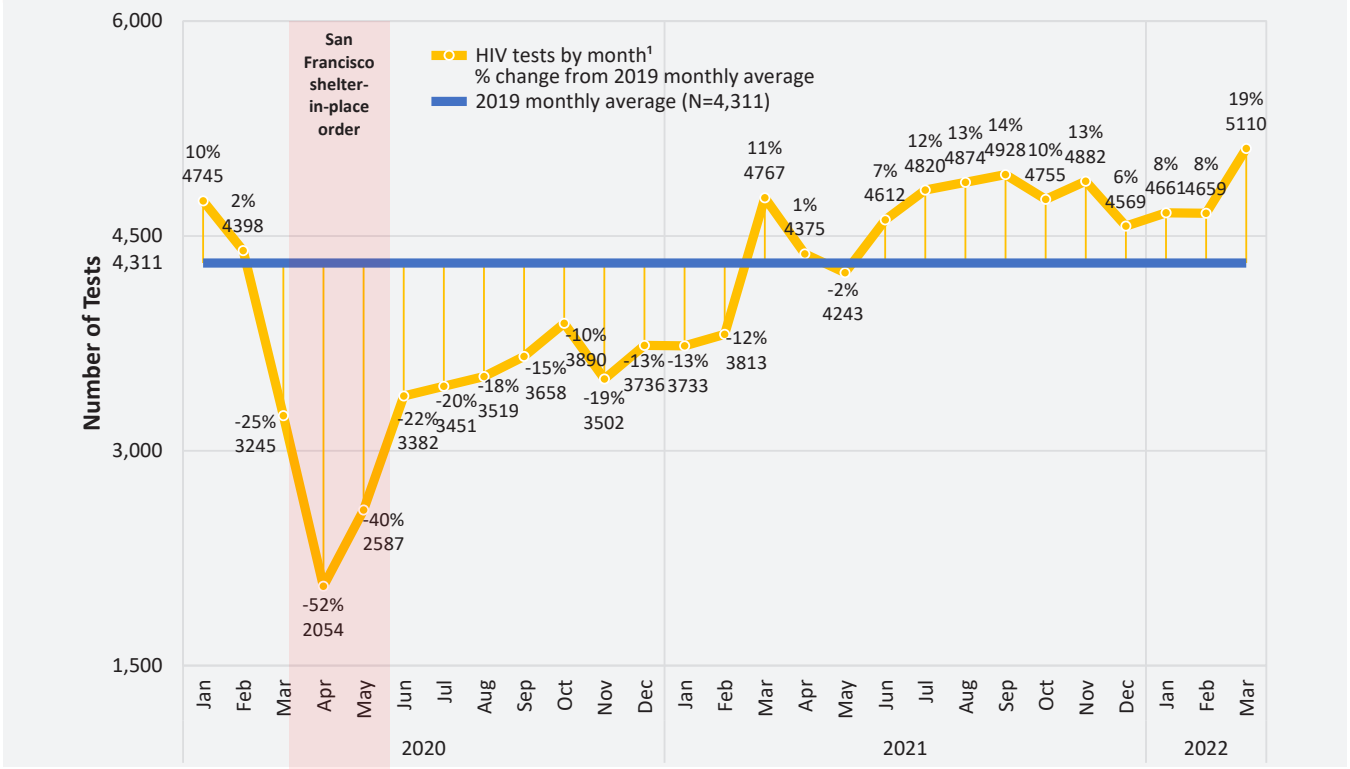
This report also includes new data in the following areas: daily and 2-1-1 PrEP regimens (Table 16.1), geographic distribution of people with viral suppression (Map 17.5) and people who migrated in and out of San Francisco (Map 17.6 and Table 17.1), viral suppression by selected social determinants of health (Table 18.1), measures of stigma among people living with HIV (Table 19.1), transmitted drug resistance and HIV-1 subtypes (Section 20). We hope that the data in this year's report will help inform program planning and implementation, and help San Francisco reach their goals of Getting to Zero and Ending the HIV Epidemic.

S HIV Testing During the COVID-19 (SARS CoV-2) Pandemic

HIV testing at medical settings

- HIV laboratory screening in 2020 at select medical sites, including positive and negative antibody/antigen test results, dropped markedly during the San Francisco shelter-in-place order. The lowest monthly screening total was in April 2020, 52% lower than the 2019 monthly average.
- From March 2020 onward, monthly screening test totals remained below the 2019 average until March 2021, where the total exceeded the average by 11%. This increase in HIV testing corresponds with a decrease in COVID-19 test positivity and the beginning of COVID-19 vaccine distribution to the general public.
- Monthly HIV screening test totals have consistently exceeded the 2019 average since June 2021.
- Compared to the average number of HIV tests at medical sites in 2019 (N=4,311), the average number in 2020 (N=3,514) was 18% lower and the average number in 2021 (N=4,531) was 5% higher.
- March 2022 recorded the highest number of monthly HIV tests since January 2020 (N=5,110), 19% higher than the 2019 monthly average.

Figure S.1 HIV screening tests at select medical facilities during January 2020 to March 2022 compared to 2019, San Francisco

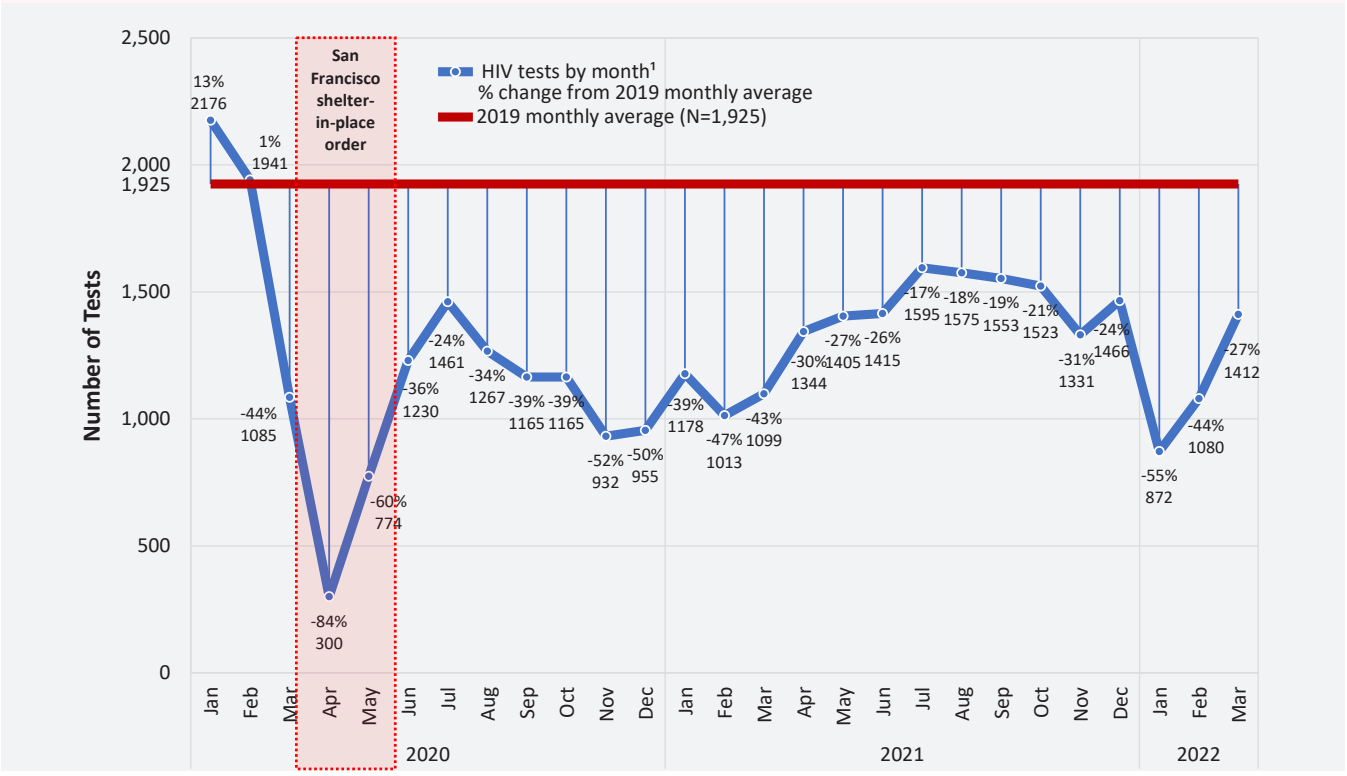


1 Includes reporting of positive and negative HIV-1/2 Antigen/Antibody (4th generation) test results from ZSFG, UCSF and CPMC laboratories as of April 2022. Data span to March 2022 for the purpose of tracking effects of the COVID-19 pandemic.

HIV testing at community settings

- Qualitative pooled HIV RNA tests performed by the SFDPH Public Health Laboratory (see Technical Notes "HIV Qualitative Pool Testing") are used as a primary screening method by the major STI clinic, San Francisco City Clinic, and some private community testing sites. The HIV Antibody/Antigen testing increased during the COVID-19 pandemic especially in early 2022 by a large community testing site and is included in the data presented below.
- Monthly screening tests decreased sharply during the shelter-in-place order, culminating in an 84% reduction in April 2020 compared to the 2019 monthly average, and remained lower than the 2019 testing level through March 2022.
- The monthly numbers increased notably since April 2021 and persisted at higher levels through the end of 2021. The average number of monthly tests in 2021 was 29% lower than the 2019 average.
- The screening tests in the early months in 2022 remained low due to several factors, including the COVID-19 omicron variant surge in January 2022 and testing supply shortages at a major testing site.

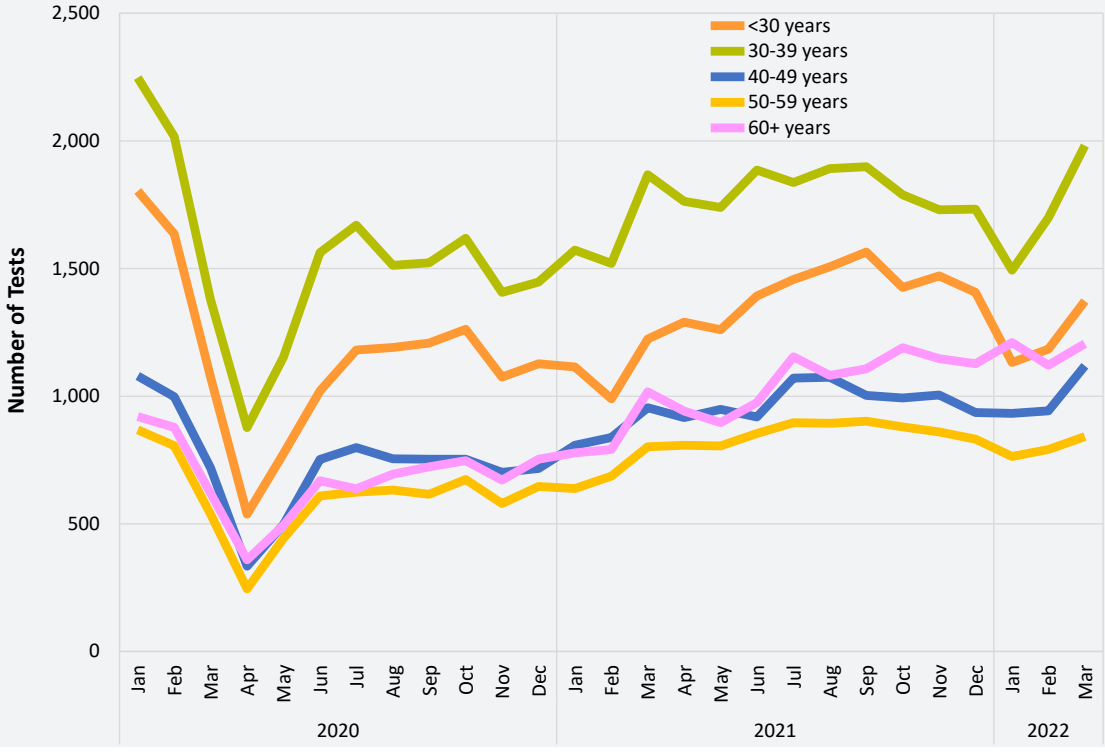
Figure S.2 HIV screening tests at community sites during January 2020 to March 2022 compared to 2019, San Francisco



1 Includes HIV qualitative pool testing data and HIV-1/2 Antibody/Antigen (4th generation) tests from SFDPH laboratory as of April 2022. See Technical Notes "HIV Qualitative Pool Testing." Data included through March 2022 for the purpose of tracking effects of the COVID-19 pandemic.

- The greatest reduction in test totals for every age group occurred in April 2020, at the height of the shelter-in-place order.
- A general upward trend in testing for all groups began in March 2021 and continued through September 2021.
- A drop in test totals is also apparent for the <30, 30-39, and 50-59 age groups around January 2022, when the COVID-19 omicron variant surge was occurring, but a quick rebound was observed in the following months.
- Test totals remained highest for the 30-39 age group throughout the entire period.

Figure S.3 Laboratory-based HIV screening tests[1] by age group, January 2020 - March 2022, San Francisco

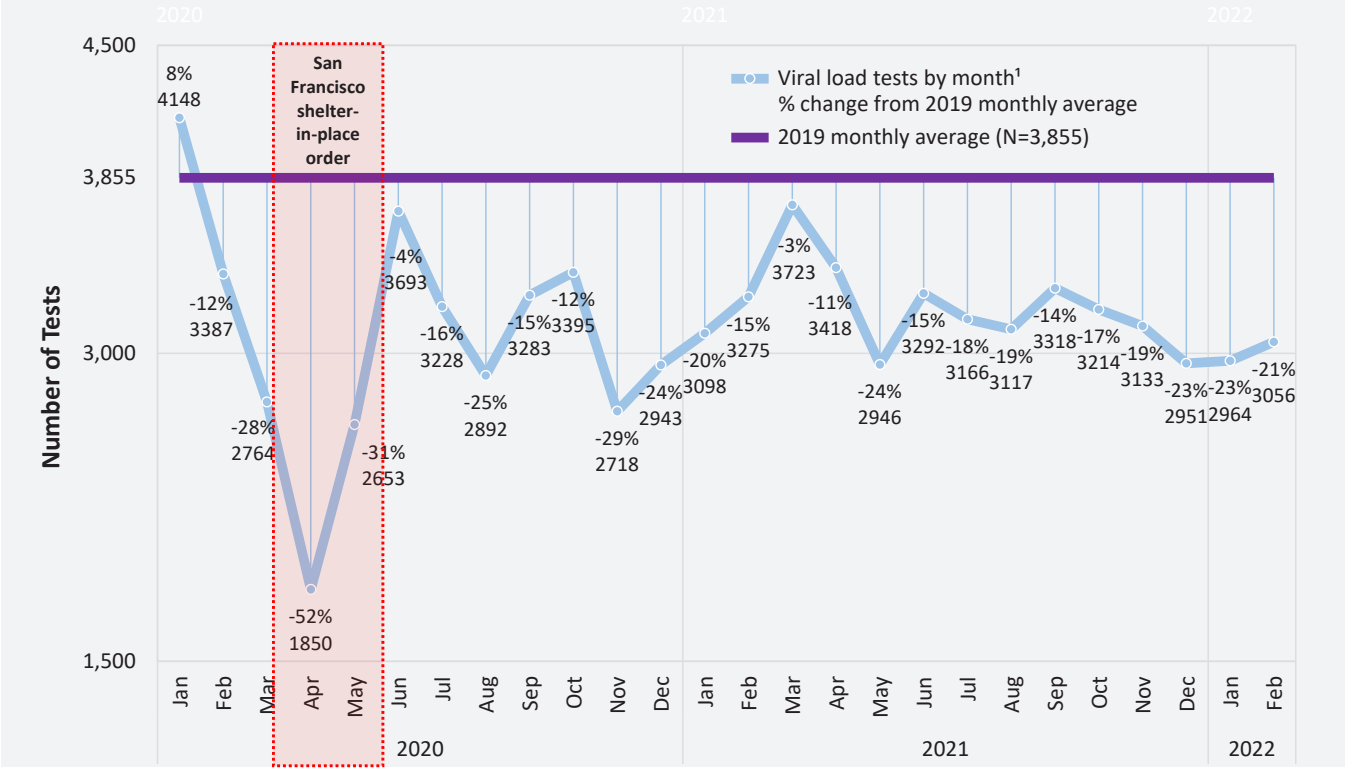


1 Includes reporting of positive and negative HIV-1/2 Antibody/Antigen (4th generation) test results from ZSFGH, UCSF, CPMC and SFDPH laboratories, in addition to pooled HIV RNA testing from the SFDPH laboratory as of April 2022. Excludes tests with unknown age. Data included through March 2022 for the purpose of tracking effects of the COVID-19 pandemic.

HIV viral load testing

- HIV viral load testing among people living with HIV, an indicator of receipt of HIV care, declined in 2021 compared to the pre-COVID-19 pandemic monthly average of viral load tests in 2019.
- The number of viral load tests increased in June 2020 to nearly the 2019 average but declined again in the following months and fluctuated through February 2022.
- Overall, the average number of monthly HIV viral load tests in 2021 was 3,221, 16% lower than the 2019 monthly average of 3,855 tests, but 5% higher than the 2020 monthly average of 3,080 tests.
- From April 2021 to February 2022, viral load test monthly volume was consistently more than 10% lower than the 2019 monthly average volume.

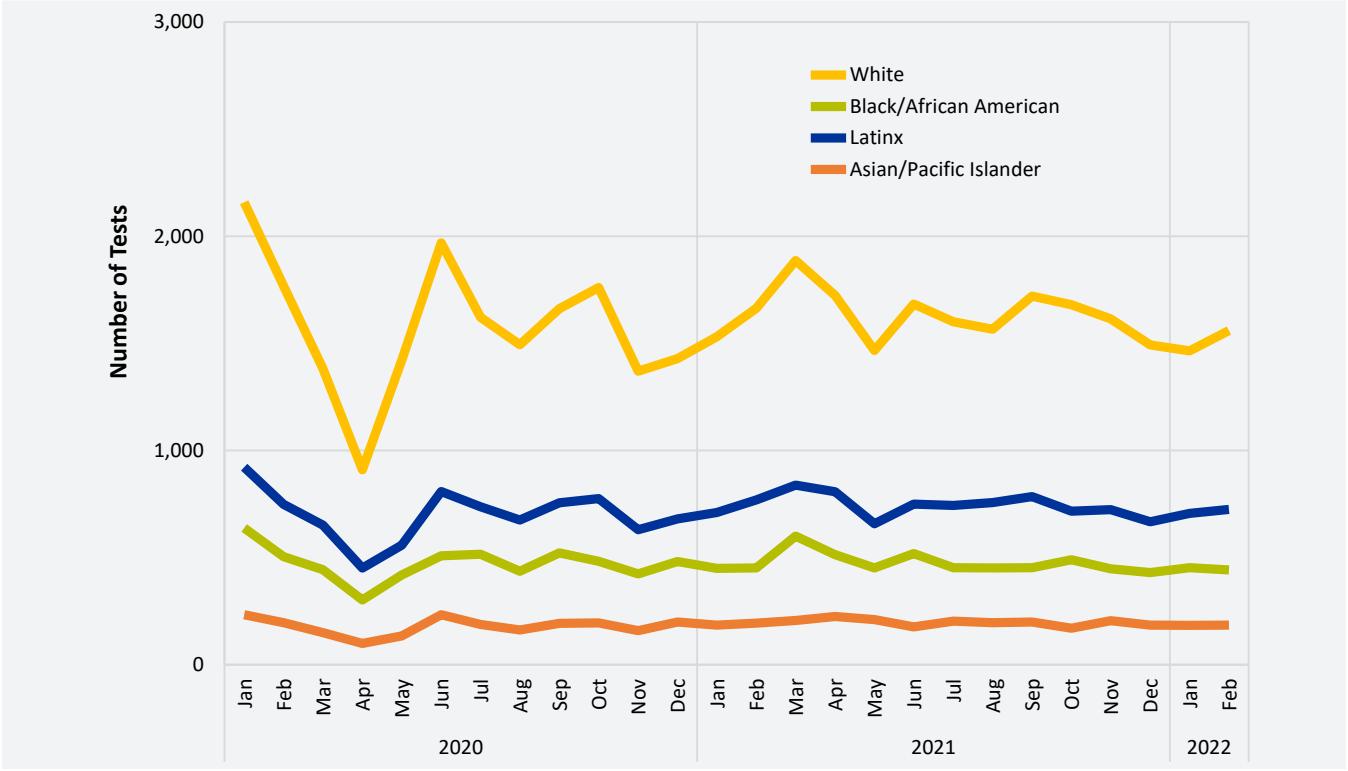
Figure S.4 HIV viral load tests among people living with HIV during January 2020 to February 2022 compared to 2019, San Francisco



1 Includes viral load data reported as of March 28, 2022 for San Francisco residents and OOJ residents who received care in San Francisco.

- The number of HIV viral load tests among people with HIV decreased in 2020 for all racial/ethnic groups with the largest decline in April 2020; the number of viral load tests gradually increased after the decline in April 2020 and fluctuated through the end of 2021.

Figure S.5 HIV viral load tests[1] among people living with HIV by race/ethnicity, January 2020 - February 2022, San Francisco

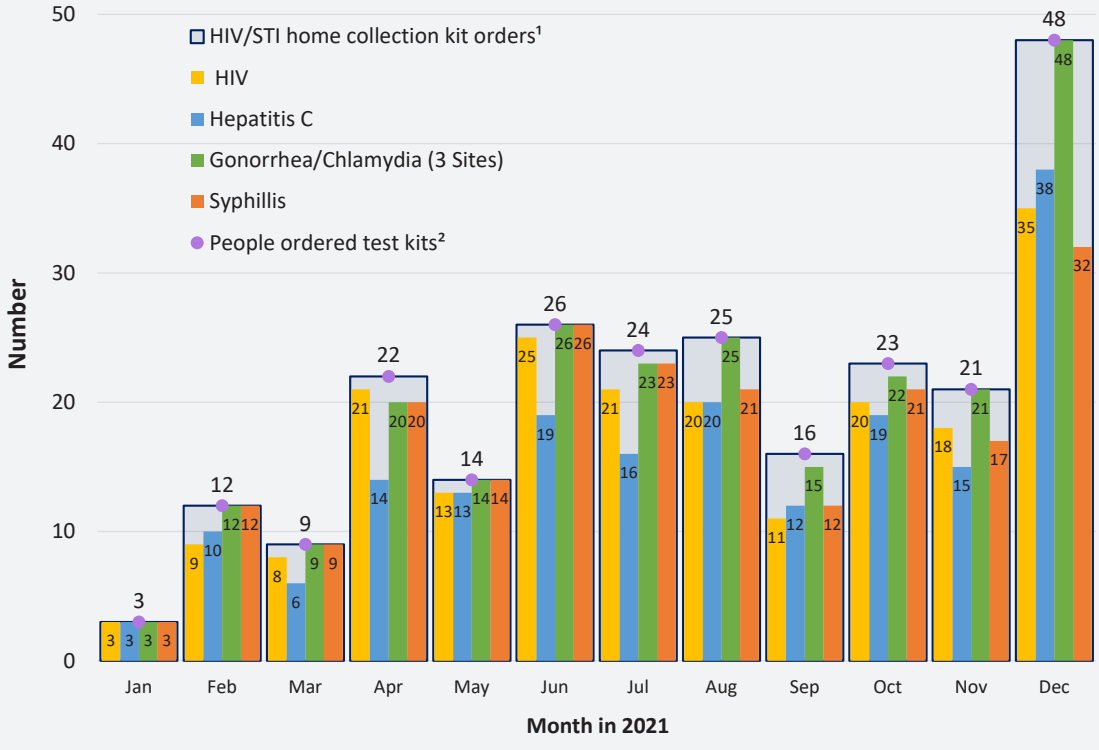


1 Includes viral load data reported as of March 28, 2022 for San Francisco residents and OOJ residents who received care in San Francisco.

San Francisco HIV/STI Home Testing Program: Take Me Home

- The San Francisco HIV/STI Home Testing Program (Take Me Home) launched in March 2020. Initially, the program offered only the HIV OraQuick rapid test. In January 2021, the program changed from the HIV QraQuick rapid test to the lab-based self-collection HIV test and expanded to include laboratory-based self-collection hepatitis C virus (HCV) and STI testing (see Technical Notes "San Francisco HIV/STI Home Testing Program").
- In 2021, 237 unique individuals ordered HIV, HCV or STI test kits.
- During this time period, 204 HIV tests, 185 HCV tests, 238 3-site gonorrhea/chlamydia tests, and 210 syphilis tests were ordered.
- Test kit orders were the lowest in January 2021 because the program was transitioning tests. The orders doubled in December because an online advertising campaign to promote the program was scaled up in November and December 2021.

Figure S.6 Number of home test kits ordered and number of people who ordered the kits by month, Take Me Home, 2021, San Francisco



1 Each order may contain different combination of test types; total number of tests does not equal to the number of orders.

2 There were 237 unique individuals (de-duplicated by name and date of birth) who ordered test kits during this time period; no individual ordered more than once within same month, and six individuals placed orders in different months.

- The return rates of self-collected specimens among tests were similar; 48% of 3-site gonorrhea/chlamydia tests, 47% of HIV tests, 46 % of syphilis tests, and 45% of HCV tests were returned.
- No new HIV and HCV diagnoses were identified during this time period.
- One individual was tested positive with syphilis and treated within six days from when the result was reported. Six individuals tested positive with gonorrhea and five of them were treated. Ten individuals were tested positive with chlamydia and eight of them were treated.

Table S.1 Test specimen return rate, disease diagnosis and treatment status among people who returned specimens, Take Me Home, 2021, San Francisco

		Tests Ordered	Specimens Returned[1] among Tests Ordered		Positives[2] among Specimens Returned		Treated among Positives		Median Days from Result Report to Treatment
		Number	Number	%	Number	%	Number	%	
Test Type	HIV	204	95	47%	0	0%			
	Hepatitis C	185	84	45%	0	0%			
	Chlamydia (3 Sites)	238	115	48%	10	9%	8	80%	1 Day
	Gonorrhea (3 Sites)	238	115	48%	6	5%	5	83%	1 Day
	Syphilis	210	97	46%	1	1%	1	100%	6 Days

1 Specimens returned for gonorrhea and chlamydia (3 sites): Specimen collected from at least one anatomic site was returned.

2 Positives for HIV, hepatitis C, and syphilis include only people who were not known to have tested positive before for that test. Positives for gonorrhea and chlamydia (3 Sites) are people who had at least one anatomic site tested positive.

- The majority of people who ordered HIV/STI home test kits in 2021 were male (87%). Fifty percent of males and 37% of females returned their home test specimens.
- Whites accounted for 39% of participants in this program, Latinx 19%, Asians/Pacific Islanders (APIs) 17%, and Black/African Americans 7%. Whites had the highest specimen return rate of 53%; Latinx had the second highest (49%), followed by APIs (38%) and Black/African Americans (35%).
- This program aimed to reach younger men who have sex with men; participants were predominantly younger aged people, with over two-thirds under 40 years of age. People under 30 years of age had the highest specimen return rate of 62%, followed by people aged 60 years and over (50%).
- Over half of participants reported they had at least three sex partners in the past 12 months and 14% of participants reported having one sex partner in the past 12 months.
- Geographically, the top four San Francisco regions where people who ordered HIV/STI home test kits resided were Pacific Heights/Marina (13%), South of Market (12%), and Ballpark/Mission Bay and the Castro (11%).

Table S.2 People who ordered home test kits by select characteristics, Take Me Home, 2021, San Francisco

		Unique Persons[1]				Unique Persons[1]	
		Ordered Test Kits	Returned Specimens[2]			Ordered Test Kits	Returned Specimens[2]
		Number (% of Total)	Number (Row %)			Number (% of Total)	Number (Row %)
	Total	**237**	**114 (48)**		**Total**	**237**	**114 (48)**
Sex at Birth	Male	207 (87)	103 (50)	Region[4]	Ballpark/Mission Bay	25 (11)	12 (48)
	Female	30 (13)	11 (37)		Bayview	6 (3)	3 (50)
Gender[3]	Men	172 (73)	84 (49)		Castro	27 (11)	12 (44)
	Women	23 (10)	9 (39)		Civic Center	19 (8)	8 (42)
	Other	16 (7)	4 (25)		Downtown	7 (3)	3 (43)
	Unknown	26 (11)	17 (65)		Lake Merced	6 (3)	3 (50)
Race/Ethnicity	White	93 (39)	49 (53)		Mission	16 (7)	13 (81)
	Black/African American	17 (7)	6 (35)		Outer Mission/Ingleside	10 (4)	4 (40)
	Latinx	45 (19)	22 (49)		Pacific Heights/Marina	30 (13)	14 (47)
	Asian/Pacific Islander	40 (17)	15 (38)		Panhandle/Haight Ashbury	12 (5)	6 (50)
	Other/Unknown	42 (18)	22 (52)		Richmond/Presidio	18 (8)	8 (44)
Age in Years	13-24	28 (12)	17 (61)		South of Market	28 (12)	13 (46)
	25-29	43 (18)	27 (63)		Sunset	18 (8)	9 (50)
	30-39	98 (41)	46 (47)		Treasure Island	2 (1)	0 (0)
	40-49	33 (14)	12 (36)		Twin Peaks	9 (4)	3 (33)
	50-59	23 (10)	6 (26)		Visitacion Valley	1 (<1)	0 (0)
	60+	12 (5)	6 (50)		West Portal	3 (1)	3 (100)
Number of Sex Partner in Past 12 months	1	33 (14)	23 (70)				
	2	31 (13)	13 (42)				
	≥3	127 (54)	55 (43)				
	Missing	46 (19)	23 (50)				

1 People who ordered HIV/STI test kits in 2021 are de-duplicated by name and date of birth.
2 People returned at least one test specimen. Individuals who returned more than one specimen are counted once.
3 Other gender includes transgender, queer, non-binary.
4 Region is grouped by zip codes where the test kits were mailed. It is assumed that the individual lived in the zip code where the test kit was mailed.

1 Overview of HIV in San Francisco

15,631
San Francisco residents were diagnosed and living with HIV as of 12/31/2021

11%
of PLWH in California resided in San Francisco

<2%
of PLWH in the United States resided in San Francisco

- The majority of people living with HIV (PLWH) in San Francisco were White (57%) and men who have sex with men (MSM)(73%) including MSM who also inject drugs (MSM-PWID)(13%). These percentages are slightly different than those seen in the state of California as a whole and considerably different than the entire United States.
- In 2021 and among new HIV diagnoses in San Francisco, the gender distribution shifted with an increased percentage among cis women (14%) and trans women (8%).
- Latinx people accounted for the largest proportion (38%) of 2021 diagnoses in San Francisco compared to 50% of 2020 diagnoses in all of California.
- Compared to all San Francisco PLWH, newly diagnosed people in San Francisco in 2021 had higher proportions of cis women, trans women, people of color (including Black/African Americans, Latinx, Asians/Pacific Islanders (APIs), Native Americans), trans women who have sex with men (TWSM), people who inject drugs (PWID), and heterosexuals.

Table 1.1 Characteristics of people living with HIV and people newly diagnosed with HIV in San Francisco, California and the United States

		People Living with HIV			People Newly Diagnosed with HIV		
		San Francisco[1] 2021 (N= 15,631)	California[2] 2020 (N= 139,703)	United States[3] 2020 (N= 1,072,051)	San Francisco[1] 2021 (N= 160)	California[2] 2020 (N= 3,965)	United States[3] 2020 (N= 30,692)
Gender	Cis Men	91%	87%	76%	78%	85%	80%
	Cis Women	6%	12%	23%	14%	12%	18%
	Trans Women	3%	2%	1%	8%	3%	2%
	Trans Men	<1%	<1%	<1%	1%	<1%	<1%
Race/Ethnicity	White	57%	36%	29%	33%	24%	26%
	Black/African American	12%	17%	40%	16%	17%	42%
	Latinx	21%	39%	24%	38%	50%	27%
	Asian/Pacific Islander	7%	5%	2%	9%	6%	2%
	Native American	<1%	<1%	<1%	2%	<1%	<1%
	Other/Unknown	4%	4%	5%	2%	2%	3%
Transmission Category[4]	MSM	73%	66%	56%	49%	57%	67%
	TWSM	2%	2%	--	6%	3%	--
	PWID	5%	5%	11%	12%	6%	7%
	MSM-PWID	13%	6%	5%	14%	3%	4%
	TWSM-PWID	1%	--	--	1%	--	--
	Heterosexual	4%	15%	26%	6%	19%	21%
	Other/Unidentified	2%	5%	2%	12%	12%	1%

1 San Francisco data are reported through March 25, 2022 for HIV diagnoses through December 31, 2021. San Francisco 2021 new diagnoses may be revised due to case reporting delay. Death reporting is incomplete for 2021; the number of San Francisco PLWH may be revised downward.

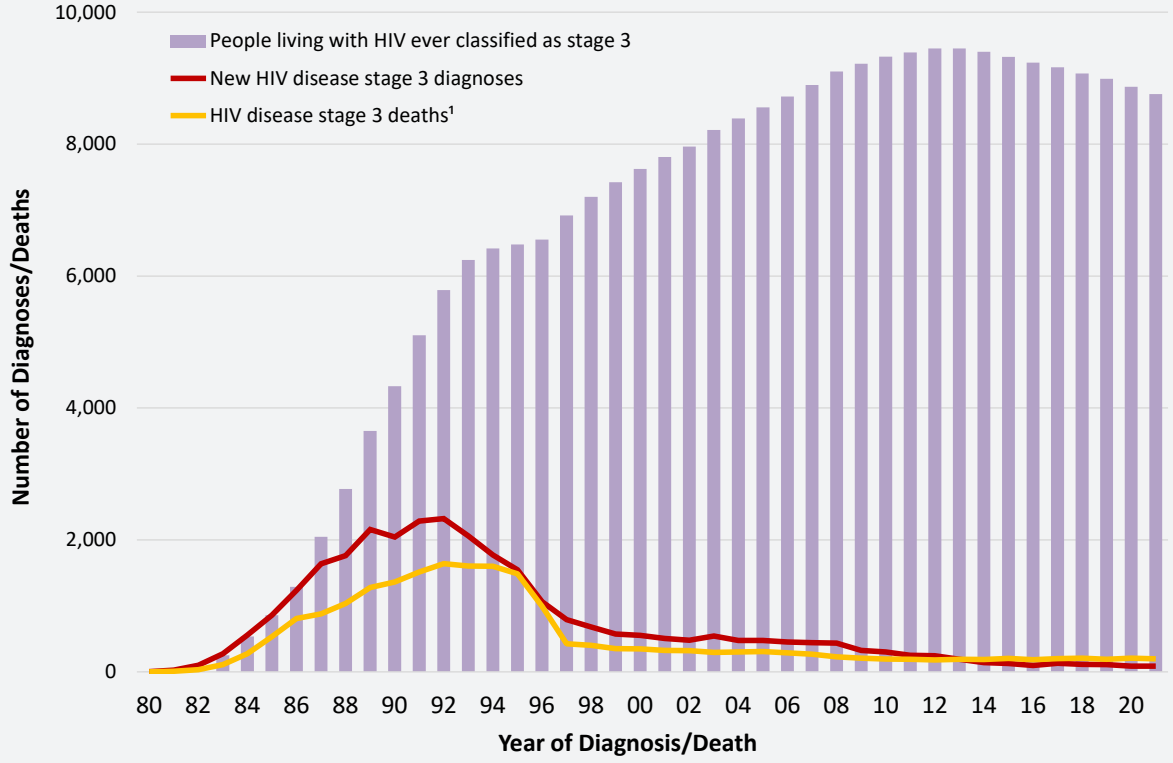
2 California data are reported through December 31, 2021 for HIV diagnoses through December 31, 2020. The number of California's new diagnoses does not include people with unreported race and ethnicity.

3 U.S. data are reported through December 31, 2021 and reflect HIV diagnoses through December 31, 2020. U.S. data for PLWH are available through December 31, 2020 due to delays in death reporting. U.S. data reflect unadjusted numbers for 50 states and 6 dependent areas and may be found in the Centers for Disease Control and Prevention, HIV Surveillance Report, 2020; vol. 33. http://www.cdc.gov/hiv/library/reports/hiv-surveillance.ht30. Published May 2022. Accessed [June 7, 2022]. U.S. racial/ethnic group data for new diagnoses only reflect people with racial/ethnic group information.

4 U.S. transmission category data for adults and adolescents have been statistically adjusted for missing values and not released separately for transgender people.

- The number of San Francisco residents diagnosed with HIV stage 3 (AIDS) reached a peak in 1992 and declined thereafter.
- New stage 3 diagnoses leveled off in 2018 and 2019, declined in 2020 to 86 new diagnoses and was level in 2021 with 87 diagnoses.
- Beginning in 1995, the number of deaths among people ever classified as stage 3 (yellow line) decreased dramatically due to the use of antiretroviral therapies.
- In 2013, the number of deaths among people with stage 3 diagnosis exceeded the number of new stage 3 diagnoses.
- People living with stage 3 diagnosis peaked in 2012, plateaued in 2013, declined through 2020, and was steady in 2021.
- By the end of 2021, there were 8,759 San Francisco residents living with HIV ever classified as stage 3.

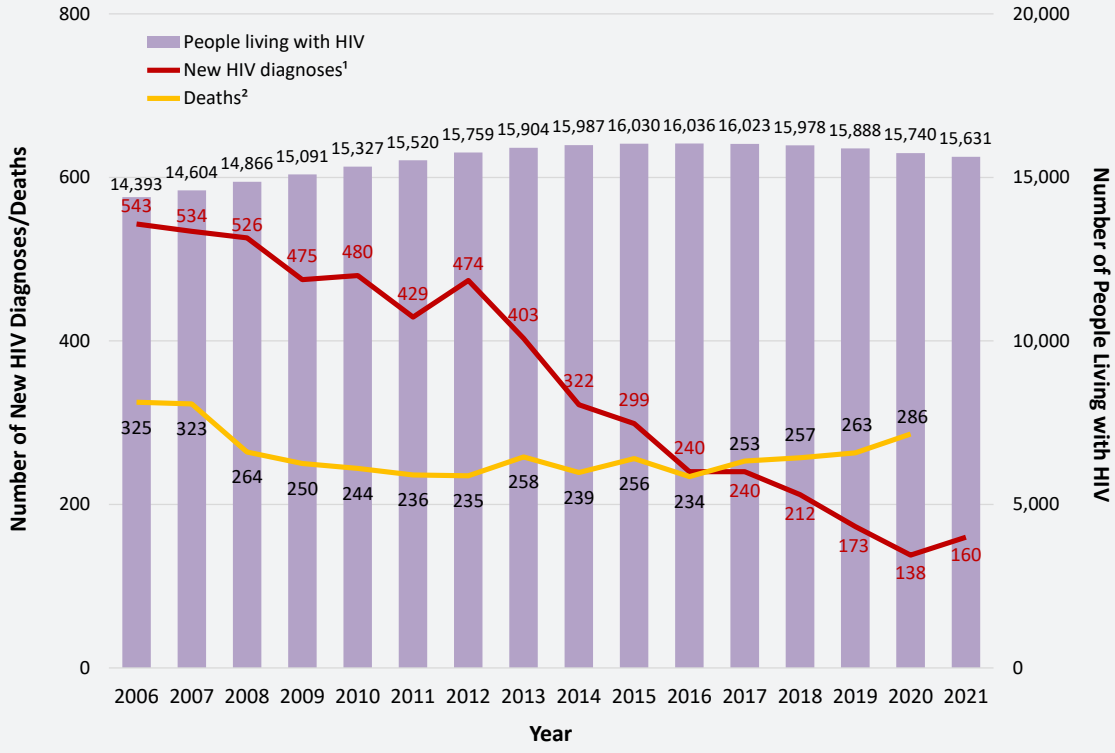
Figure 1.1 HIV disease stage 3 (AIDS) diagnoses, deaths, and prevalence, 1980-2021, San Francisco



1 Death reporting for 2021 is not complete.

- The number of new HIV diagnoses declined from 543 in 2006 to 160 in 2021.
- New HIV diagnoses have steadily declined, however the dip in 2020 diagnoses to 138 should be interpreted with caution due to the effects of the COVID-19 pandemic and shelter-in-place orders during 2020.
- The number of yearly deaths fluctuated, with increases in recent years from 234 in 2016 to 286 in 2020.
- The provisional number of PLWH at the end of 2021 is 15,631; this will be revised when death reporting for 2021 is complete.

Figure 1.2 HIV diagnoses, deaths, and prevalence, 2006-2021, San Francisco



1 See Technical Notes "Date of Initial HIV Diagnosis."
2 Death data for 2021 not complete and not displayed.

- Overall and from 2012 to 2021, the proportion of cis men newly diagnosed has declined while the proportion of cis women has increased.
- In the past decade, Latinx people experienced the largest proportional increase of new diagnoses, accounting for 38% of new diagnoses in 2021.
- By age groups, 30-39 year-olds continued to account for the highest proportion of diagnoses each year; they accounted for one-third of annual diagnoses each year in 2020 and 2021.
- The proportion of people diagnosed at age of 50 years and older has increased over the last decade accounting for 18% of new diagnoses in 2021.
- No children (<13 years) were diagnosed with HIV during 2012 to 2021.
- The majority of people newly diagnosed with HIV were MSM for years 2012 through 2021; however, the proportion of MSM declined during this time period from 74% in 2012 to 49% in 2021.
- PWID (including MSM, non-MSM, and TWSM) accounted for 21% of diagnoses in 2020 and 27% of diagnoses in 2021.

Table 1.2 Trends in people newly diagnosed with HIV by demographic and risk characteristics, 2012-2021, San Francisco

		Year of Initial HIV Diagnosis[1]									
		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Total Number	474	403	322	299	240	240	212	173	138	160
Gender	Cis Men	92%	92%	92%	88%	85%	86%	88%	83%	81%	78%
	Cis Women	6%	5%	4%	10%	10%	11%	8%	8%	13%	14%
	Trans Women	3%	3%	4%	3%	4%	3%	4%	8%	5%	8%
	Trans Men	0%	0%	0%	0%	<1%	0%	<1%	1%	1%	1%
Race/Ethnicity	White	48%	45%	42%	40%	38%	34%	28%	34%	29%	33%
	Black/African American	11%	12%	10%	15%	14%	16%	19%	17%	20%	16%
	Latinx	25%	28%	29%	26%	30%	30%	40%	32%	38%	38%
	Asian/Pacific Islander	11%	12%	14%	12%	16%	13%	9%	12%	11%	9%
	Native American	1%	<1%	<1%	<1%	0%	1%	<1%	2%	1%	2%
	Multi-race	5%	3%	5%	6%	3%	5%	3%	2%	1%	2%
	Unknown	<1%	<1%	0%	<1%	0%	0%	0%	0%	0%	0%
Age at HIV Diagnosis (years)	13 - 17	0%	<1%	<1%	1%	<1%	1%	<1%	0%	0%	0%
	18 - 24	13%	16%	13%	13%	14%	11%	15%	9%	12%	8%
	25 - 29	16%	20%	18%	25%	22%	17%	20%	14%	17%	19%
	30 - 39	30%	28%	29%	30%	33%	35%	31%	38%	33%	34%
	40 - 49	28%	25%	23%	21%	15%	20%	20%	17%	19%	21%
	50+	12%	12%	16%	10%	15%	16%	13%	21%	20%	18%
Transmission Category	MSM	74%	74%	73%	73%	68%	60%	63%	64%	62%	49%
	TWSM	2%	2%	2%	2%	3%	1%	2%	5%	5%	6%
	PWID	4%	5%	7%	6%	9%	11%	13%	7%	11%	12%
	MSM-PWID	11%	12%	12%	9%	10%	13%	12%	9%	10%	14%
	TWSM-PWID	<1%	<1%	1%	<1%	1%	1%	1%	3%	0%	1%
	Heterosexual	6%	4%	3%	7%	7%	7%	5%	5%	6%	6%
	Other/Unidentified	2%	1%	1%	2%	3%	7%	4%	8%	7%	12%

1 Data include people diagnosed with HIV in any stage and reported as of March 24, 2022. Percentages may not add to 100 due to rounding. See Technical Notes "Date of Initial HIV Diagnosis."

- The number of PLWH who were San Francisco residents at time of diagnosis declined each year from 2017 to 2021.
- PLWH in this time period were predominately cis men, White, and MSM (including MSM-PWID).
- PLWH continue to live longer lives and age; the proportion of people aged 60 and older increased from 28% in 2017 to 39% in 2021).

Table 1.3 Trends in people living with HIV by demographic and risk characteristics, 2017-2021, San Francisco

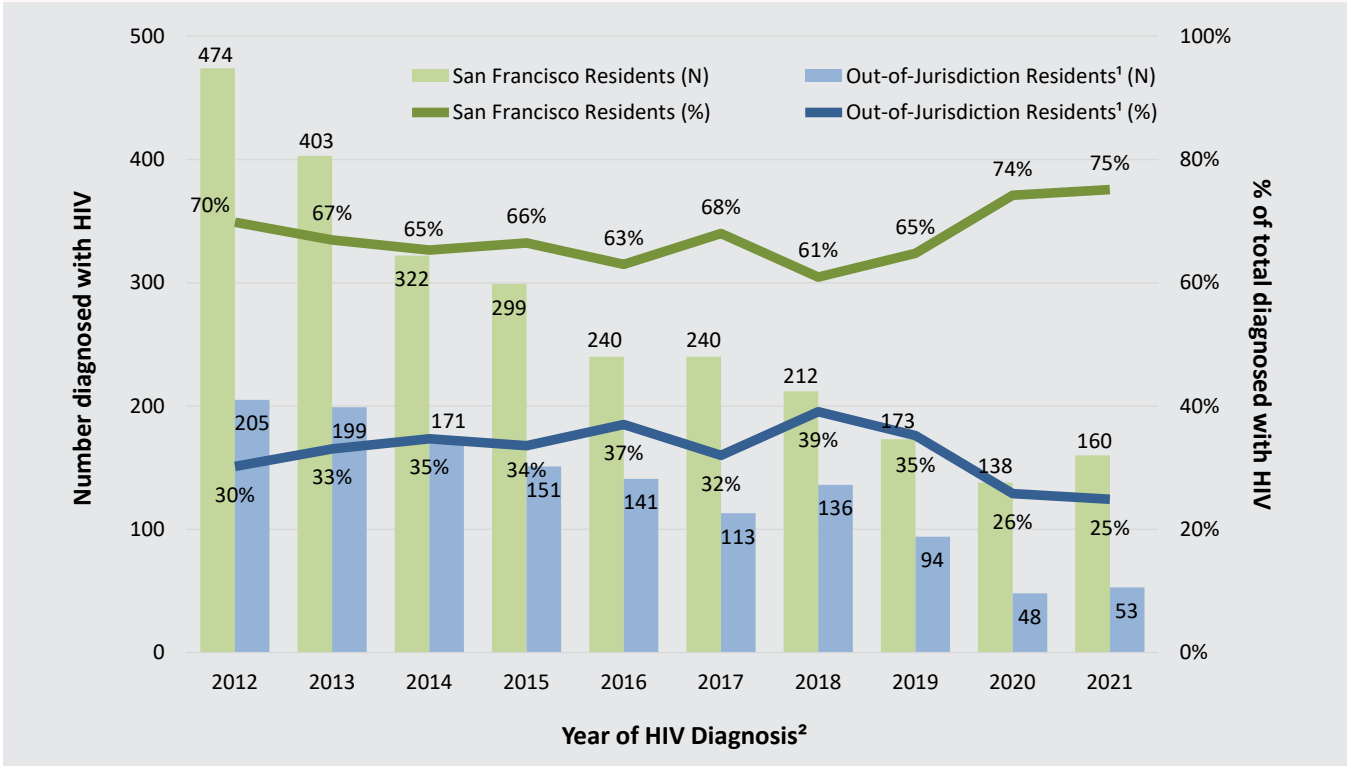
		2017	2018	2019	2020	2021[2]
		Number (%)				
	Total[1]	**16,023**	**15,978**	**15,888**	**15,740**	**15,631**
Gender	Cis Men	14,693 (92)	14,650 (92)	14,555 (92)	14,411 (92)	14,302 (91)
	Cis Women	912 (6)	907 (6)	902 (6)	900 (6)	898 (6)
	Trans Women	412 (3)	415 (3)	423 (3)	420 (3)	421 (3)
	Trans Men	6 (<1)	6 (<1)	8 (<1)	9 (<1)	10 (<1)
Race/Ethnicity	White	9,268 (58)	9,194 (58)	9,107 (57)	8,970 (57)	8,869 (57)
	Black/African American	1,896 (12)	1,880 (12)	1,866 (12)	1,848 (12)	1,819 (12)
	Latinx	3,207 (20)	3,253 (20)	3,265 (21)	3,280 (21)	3,298 (21)
	Asian/Pacific Islander	993 (6)	998 (6)	1,006 (6)	1,013 (6)	1,024 (7)
	Native American	58 (<1)	59 (<1)	62 (<1)	61 (<1)	61 (<1)
	Multi-race	593 (4)	586 (4)	574 (4)	560 (4)	552 (4)
	Unknown	8 (<1)	8 (<1)	8 (<1)	8 (<1)	8 (<1)
Age in Years (at end of each year)	0 - 12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	13 - 17	6 (<1)	4 (<1)	3 (<1)	3 (<1)	2 (<1)
	18 - 24	110 (1)	105 (1)	79 (<1)	71 (<1)	50 (<1)
	25 - 29	419 (3)	367 (2)	314 (2)	280 (2)	250 (2)
	30 - 39	1,823 (11)	1,779 (11)	1,736 (11)	1,615 (10)	1,533 (10)
	40 - 49	3,374 (21)	3,135 (20)	2,881 (18)	2,660 (17)	2,501 (16)
	50 - 59	5,846 (36)	5,778 (36)	5,684 (36)	5,510 (35)	5,250 (34)
	60 - 69	3,496 (22)	3,714 (23)	3,943 (25)	4,123 (26)	4,327 (28)
	70+	949 (6)	1,096 (7)	1,248 (8)	1,478 (9)	1,718 (11)
Transmission Category	MSM	11,639 (73)	11,626 (73)	11,587 (73)	11,519 (73)	11,455 (73)
	TWSM	237 (1)	238 (1)	244 (2)	249 (2)	253 (2)
	PWID	887 (6)	881 (6)	861 (5)	846 (5)	822 (5)
	MSM-PWID	2,258 (14)	2,223 (14)	2,175 (14)	2,110 (13)	2,075 (13)
	TWSM-PWID	172 (1)	173 (1)	175 (1)	167 (1)	163 (1)
	Heterosexual	575 (4)	574 (4)	573 (4)	572 (4)	570 (4)
	Other/Unidentified	255 (2)	263 (2)	273 (2)	277 (2)	293 (2)

1 People living with HIV at the end of each year.

2 Provisional number will be revised when death reporting for 2021 is complete.

- People who reside outside of San Francisco (Out-of-Jurisdiction, OOJ) are often diagnosed at San Francisco facilities and testing sites.
- The annual number of OOJ residents diagnosed in San Francisco has declined from 2012 to 2021, with steeper declines beginning in 2019.
- The proportion of all new HIV diagnoses reported each year that were OOJ residents increased slightly from 2012 to 2018, with 39% of all new diagnoses reported being OOJ residents in 2018.
- The proportion of OOJ residents who were diagnosed declined after 2018; OOJ residents comprised a quarter of new diagnoses in 2021.
- In 2020 and 2021, there was a noticeable decrease in the number and proportion of OOJ residents who were diagnosed in San Francisco. This decline reflects the impact of the COVID-19 pandemic and the following may be factors for this persistent trend: (1) regional and statewide shelter-in-place orders in 2020, (2) work from home policies that reduced OOJ residents' commute to and time spent in San Francisco.

Figure 1.3 San Francisco residents and out-of-jurisdiction residents diagnosed with HIV in San Francisco, 2012-2021



1 See Technical Notes "Out-of-Jurisdiction Residents Diagnosed with HIV."
2 See Technical Notes "Date of Initial HIV Diagnosis."

- As of December 31, 2021, 15,631 PLWH who were San Francisco residents at diagnosis were alive and 8,884 (57%) of these residents were still living in the city based on their most recent available address.
- The total number of PLWH with a known current San Francisco address was 11,830 by the end of 2021; OOJ residents at diagnosis made up 25% of these residents.
- Gender, race/ethnicity, and transmission risk distributions of San Francisco residents at diagnosis who were still living in San Francisco (N=8,884) were very similar to those living in San Francisco who were OOJ residents at diagnosis (N=2,946).
- A greater proportion of OOJ residents at diagnosis now living in San Francisco were under 50 years and MSM.

Table 1.4 Characteristics of people living with HIV as of December 2021 by residence status, San Francisco

			PLWH who were SF residents based on most recent address[1] (N=11,830)	
		PLWH who were SF residents at diagnosis	SF residents at diagnosis	OOJ residents at diagnosis
		Number (%)		
	Total	**15,631**	**8,884**	**2,946**
Gender[2]	Cis Men	14,302 (91)	7,961 (90)	2,735 (93)
	Cis Women	898 (6)	609 (7)	111 (4)
	Trans Women	421 (3)	305 (3)	99 (3)
Race/Ethnicity	White	8,869 (57)	4,589 (52)	1,424 (48)
	Black/African American	1,819 (12)	1,108 (12)	430 (15)
	Latinx	3,298 (21)	2,154 (24)	747 (25)
	Asian/Pacific Islander	1,024 (7)	691 (8)	150 (5)
	Other/Unknown	621 (4)	342 (4)	195 (7)
Age in Years (as of 12/31/2021)	0 - 12	0 (0)	0 (0)	0 (0)
	13 - 17	2 (<1)	1 (<1)	0 (0)
	18 - 24	50 (<1)	39 (<1)	23 (1)
	25 - 29	250 (2)	168 (2)	131 (4)
	30 - 39	1,533 (10)	916 (10)	684 (23)
	40 - 49	2,501 (16)	1,448 (16)	659 (22)
	50 - 59	5,250 (34)	2,880 (32)	858 (29)
	60 - 69	4,327 (28)	2,389 (27)	474 (16)
	70+	1,718 (11)	1,043 (12)	117 (4)
Transmission Category	MSM	11,455 (73)	6,244 (70)	2,216 (75)
	TWSM	253 (2)	182 (2)	65 (2)
	PWID	822 (5)	557 (6)	114 (4)
	MSM-PWID	2,075 (13)	1,188 (13)	347 (12)
	TWSM-PWID	163 (1)	119 (1)	34 (1)
	Heterosexual	570 (4)	389 (4)	89 (3)
	Other/Unidentified	293 (2)	205 (2)	81 (3)

1 See Technical Notes "Residence and Receipt of Care for PLWH."

2 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

- White MSM (non-PWID) comprised 49% of cis men living with HIV in San Francisco followed by Latino MSM (non-PWID) who accounted for 17% of cis men living with HIV.
- Black/African American cis men had the highest proportion of PWID (12%) while multi-racial cis men had the highest proportion of MSM-PWID (22%).
- At the end of 2021, Latino, API, Native American, and multi-racial cis men were younger than Whites and Black/African Americans.
- Black/African American cis women accounted for 36%, White cis women 27%, and Latinas 24% of cis women living with HIV in San Francisco.
- Injection drug use was the predominant transmission category for White, Black/African American, and multi-racial cis women while heterosexual sex was the predominant transmission category for Latina and API and Native American cis women combined.
- Among trans women living with HIV, 36% were Latinx, 30% were Black/African American, 18% were White, 10% were API and Native Americans combined, and 6% were multi-racial people.

Table 1.5 Characteristics of people living with HIV as of December 2021, San Francisco

			White	Black/African American	Latinx	Asian/Pacific Islander & Native American	Multi-Race	Total Number[1]
			Number (%)					
Cis Men	Transmission Category	MSM	7,027 (82)	850 (62)	2,407 (82)	823 (85)	347 (71)	11,455
		PWID	155 (2)	168 (12)	67 (2)	22 (2)	19 (4)	431
		MSM-PWID	1,291 (15)	248 (18)	345 (12)	82 (9)	109 (22)	2,075
		Heterosexual	31 (<1)	63 (5)	55 (2)	19 (2)	7 (1)	175
		Other/Unidentified	52 (1)	38 (3)	49 (2)	17 (2)	5 (1)	166
	Age in Years (as of 12/31/2021)	0 - 12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0
		13 - 17	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0
		18 - 24	4 (<1)	11 (1)	15 (1)	8 (1)	1 (<1)	39
		25 - 29	45 (1)	42 (3)	82 (3)	27 (3)	10 (2)	206
		30 - 39	485 (6)	153 (11)	486 (17)	170 (18)	47 (10)	1,341
		40 - 49	1,038 (12)	180 (13)	643 (22)	250 (26)	111 (23)	2,223
		50 - 59	2,968 (35)	407 (30)	974 (33)	315 (33)	171 (35)	4,837
		60 - 69	2,773 (32)	429 (31)	564 (19)	143 (15)	108 (22)	4,020
		70+	1,243 (15)	145 (11)	159 (5)	50 (5)	39 (8)	1,636
		Cis Men Total	**8,556**	**1,367**	**2,923**	**963**	**487**	**14,302**
Cis Women	Transmission Category	PWID	135 (57)	153 (47)	61 (28)	13 (17)	22 (55)	384
		Heterosexual	77 (32)	136 (42)	117 (54)	55 (71)	10 (25)	395
		Other/Unidentified	26 (11)	34 (11)	39 (18)	10 (13)	8 (20)	119
	Age in Years (as of 12/31/2021)	0 - 12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0
		13 - 17	0 (0)	1 (<1)	1 (<1)	0 (0)	0 (0)	2
		18 - 24	0 (0)	3 (1)	2 (1)	0 (0)	2 (5)	7
		25 - 29	3 (1)	8 (2)	13 (6)	3 (4)	3 (8)	30
		30 - 39	25 (11)	30 (9)	38 (18)	6 (8)	3 (8)	102
		40 - 49	41 (17)	46 (14)	41 (19)	20 (26)	12 (30)	161
		50 - 59	85 (36)	100 (31)	62 (29)	27 (35)	12 (30)	286
		60 - 69	66 (28)	108 (33)	42 (19)	16 (21)	6 (15)	239
		70+	18 (8)	27 (8)	18 (8)	6 (8)	2 (5)	71
		Cis Women Total	**238**	**323**	**217**	**78**	**40**	**898**
		Trans Women Total	**74**	**127**	**152**	**44**	**24**	**421**

1 Includes people whose racial/ethnic information is not available. Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

People diagnosed with HIV disease stage 0

- Of the 1,033 San Francisco residents diagnosed with HIV in 2017 through 2021, 264 (26%) were diagnosed at stage 0 (an indicator of recent HIV acquisition), 703 (68%) at stages 1-3, and 66 (6%) could not be staged due to not having a documented CD4 T-lymphocyte test ≤ 3 months after HIV diagnosis.
- The proportion of stage 0 diagnoses was highest among trans women, people aged 13-24 years at time of diagnosis, and MSM (including MSM-PWID).

Table 1.6 Stage of HIV disease at diagnosis among people newly diagnosed with HIV in 2017-2021, San Francisco

		New Diagnoses[1]	Stage at Diagnosis[2]		
			Stage 0	Stage 1-3	Unknown
		Number (%[3])			
	Total	**1,033**	**264 (26)**	**703 (68)**	**66 (6)**
Year of HIV Diagnosis	2017	244	60 (25)	160 (66)	24 (10)
	2018	242	74 (31)	149 (62)	19 (8)
	2019	207	48 (23)	150 (72)	9 (4)
	2020	153	41 (27)	107 (70)	5 (3)
	2021	187	41 (22)	137 (73)	9 (5)
Gender[4]	Cis Men	873	221 (25)	595 (68)	57 (7)
	Cis Women	107	20 (19)	80 (75)	7 (7)
	Trans Women	48	19 (40)	27 (56)	2 (4)
Race/Ethnicity	White	333	86 (26)	228 (68)	19 (6)
	Black/African American	165	42 (25)	104 (63)	19 (12)
	Latinx	372	98 (26)	254 (68)	20 (5)
	Asian/Pacific Islander	123	26 (21)	93 (76)	4 (3)
	Other/Unknown	40	12 (30)	24 (60)	4 (10)
Age at HIV Diagnosis (years)	13-24	102	42 (41)	55 (54)	5 (5)
	25-29	180	52 (29)	115 (64)	13 (7)
	30-39	365	100 (27)	237 (65)	28 (8)
	40-49	216	34 (16)	170 (79)	12 (6)
	50+	170	36 (21)	126 (74)	8 (5)
Transmission Category	MSM	646	172 (27)	441 (68)	33 (5)
	PWID	100	21 (21)	68 (68)	11 (11)
	MSM-PWID	108	30 (28)	69 (64)	9 (8)
	Heterosexual	59	7 (12)	48 (81)	4 (7)
	Other/Unidentified[5]	120	34 (28)	77 (64)	9 (8)

1 Includes people diagnosed in the time period based on a confirmed laboratory HIV test regardless of whether they had an earlier self-report of HIV positive date.
2 The surveillance case definition includes five HIV stages at diagnosis. See Technical Notes "Stage of Disease at HIV Diagnosis."
3 Row percent of new diagnoses.
4 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
5 Includes TWSM, TWSM-PWID and people with no identified risk factor.

People diagnosed with late-stage HIV disease

- Late HIV diagnosis is defined as having a stage 3 (AIDS) diagnosis within three months of HIV diagnosis.
- From 2017 to 2021, the proportion of people newly diagnosed with late-stage HIV ranged from 15% to 19%, with a high of 19% in 2017 and a low of 15% in 2019 and 2021.
- In 2021, the proportion of late diagnoses was highest among APIs, people aged 40 years or older at time of diagnosis, and heterosexuals.

Table 1.7 Late diagnoses among people newly diagnosed with HIV in 2017-2021 by demographic and risk characteristics, San Francisco

		Year of Diagnosis[1]				
		2017	2018	2019	2020	2021
		Number of new diagnoses (% who had a late diagnosis[2])				
	Total	**244 (19)**	**242 (17)**	**207 (15)**	**153 (17)**	**187 (15)**
Gender[3]	Cis Men	212 (18)	212 (17)	174 (16)	126 (18)	149 (15)
	Cis Women	27 (22)	21 (24)	17 (12)	18 (17)	24 (13)
	Trans Women	5 (20)	8 (0)	14 (21)	8 (0)	13 (15)
Race/Ethnicity	White	88 (17)	71 (15)	67 (12)	45 (24)	62 (15)
	Black/African American	37 (16)	43 (7)	30 (20)	27 (11)	28 (14)
	Latinx	69 (19)	95 (17)	74 (8)	61 (15)	73 (12)
	Asian/Pacific Islander	33 (24)	26 (27)	28 (36)	17 (18)	19 (26)
	Other/Unknown	17 (24)	7 (43)	8 (25)	3 (0)	5 (20)
Age at HIV Diagnosis (Years)	13-24	28 (7)	30 (7)	14 (14)	17 (12)	13 (0)
	25-29	44 (16)	44 (20)	34 (6)	25 (8)	33 (12)
	30-39	81 (11)	85 (11)	79 (15)	50 (18)	70 (9)
	40-49	52 (33)	51 (18)	41 (12)	32 (13)	40 (25)
	50+	39 (28)	32 (34)	39 (28)	29 (31)	31 (26)
Transmission Category	MSM	150 (17)	159 (17)	135 (13)	97 (18)	105 (17)
	PWID	26 (19)	26 (15)	14 (29)	16 (19)	18 (22)
	MSM-PWID	32 (16)	24 (8)	15 (0)	15 (20)	22 (0)
	Heterosexual	16 (31)	12 (33)	13 (31)	8 (0)	10 (30)
	Other/Unidentified[4]	20 (30)	21 (14)	30 (20)	17 (18)	32 (9)
Housing Status	Homeless	30 (27)	50 (16)	41 (17)	29 (14)	40 (10)
	Housed	202 (18)	186 (17)	163 (15)	121 (18)	140 (17)
	Unknown	12 (8)	6 (0)	3 (0)	3 (0)	7 (0)
Country of Birth	US/US Dep.	107 (15)	114 (11)	80 (15)	70 (17)	89 (20)
	Non-US	69 (32)	91 (23)	69 (16)	46 (20)	55 (13)
	Unknown	68 (12)	37 (19)	58 (16)	37 (14)	43 (7)

1 Date of HIV diagnosis is based on a confirmed laboratory HIV test and does not take into account self-report of HIV infection.
2 Percent of people with new diagnoses in the year who developed AIDS within 3 months of HIV diagnosis.
3 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
4 Includes TWSM, TWSM-PWID and people with no identified risk factor.

2 Trends in HIV Diagnoses

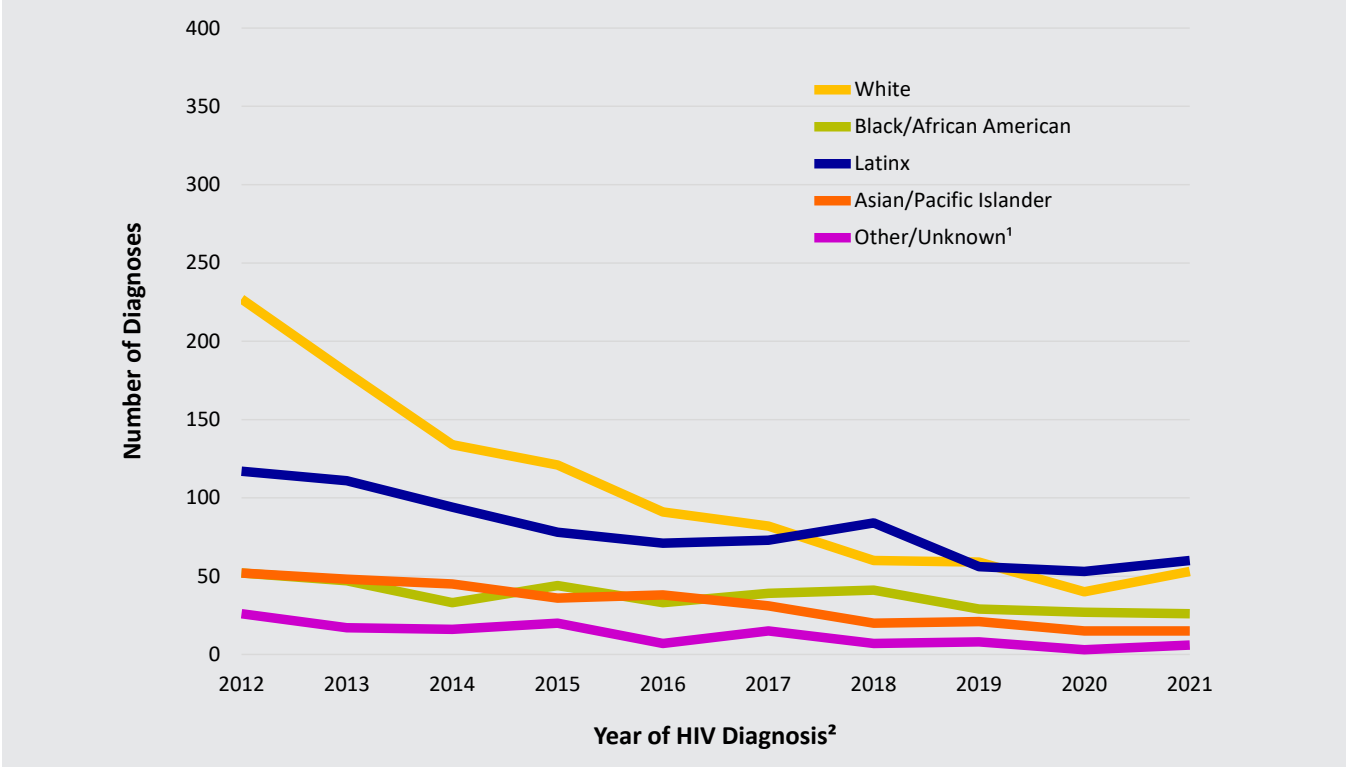
Race/ethnicity

Whites

ACCOUNTED FOR 39% OF PEOPLE NEWLY DIAGNOSED WITH HIV FROM 2012-2021

- HIV diagnoses among Whites declined from 2012 through 2018, and remained steady from 2018 to 2019; diagnoses in 2020 declined to 40 and in 2021 increased to 53.
- Overall, diagnoses among Latinx declined from 2012 to 2021 with some fluctuations between 2017 and 2021.
- Diagnoses among Black/African Americans also declined since 2012 to 26 in 2021.
- Asian/Pacific Islander (API) diagnoses declined since 2012 and have been level in 2020 and 2021 at 15 diagnoses per year.

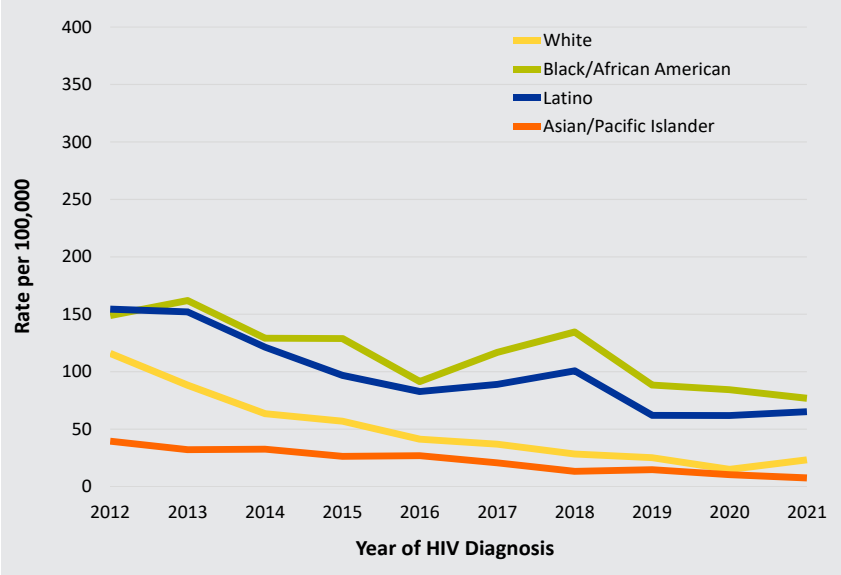
Figure 2.1 Number of people newly diagnosed with HIV by race/ethnicity, 2012-2021, San Francisco



1 HIV diagnoses in the "Other/Unknown" racial/ethnic category include 15% Native Americans, 82% multi-race, and 2% unknown.
2 See Technical Notes "Date of Initial HIV Diagnosis."

- Among cis men, Whites had the most sustained decline in annual population-specific rates of HIV diagnosis from 2013 to 2021.
- During 2012 to 2021, Black/African American and Latino cis men's diagnosis rates trended similarly; Latino rates were fairly steady for the last three years (2019 to 2021), while Black/African American cis men had a very slight decline in diagnosis rates for the last three years.
- From 2012 to 2021, API cis men diagnosis rates declined gradually.
- For 2021, diagnosis rates (per 100,000) for cis men were 77 for Black/African Americans, 65 for Latinos, 23 for Whites, and 8 for APIs.

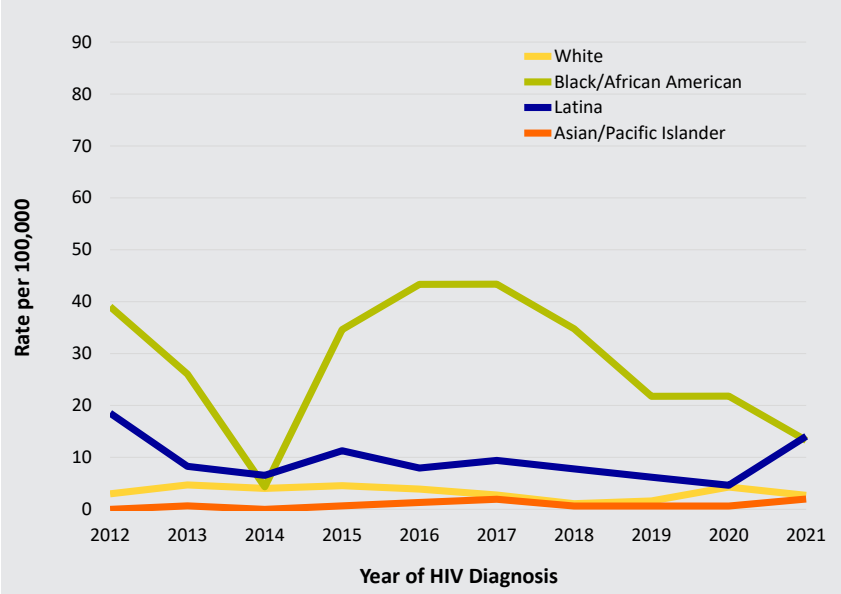
Figure 2.2 Annual rates[1] of cis men newly diagnosed with HIV per 100,000 population by race/ethnicity, 2012-2021, San Francisco



1 See Technical Notes "HIV Case Rates and HIV Mortality Rates." Includes people with HIV by year of their initial HIV diagnosis. Rates for Native Americans and multi-racial new diagnoses are not calculated due to small numbers.

- For 2012 through 2021, the annual population-specific rates of HIV diagnosis were lower for White, Black/African American, Latina, and API cis women compared to cis men of the same racial/ethnic group.
- Annual diagnosis rates for Black/African American cis women and Latinas showed signs of convergence in 2021 (13 per 100,000 for Black/African American cis women and 14 per 100,000 for Latinas).
- Diagnosis rates for White cis women and API cis women were very low in 2021 (3 per 100,000 for Whites and 2 per 100,000 for APIs).

Figure 2.3 Annual rates[1] of cis women newly diagnosed with HIV per 100,000 population by race/ethnicity, 2012-2021, San Francisco

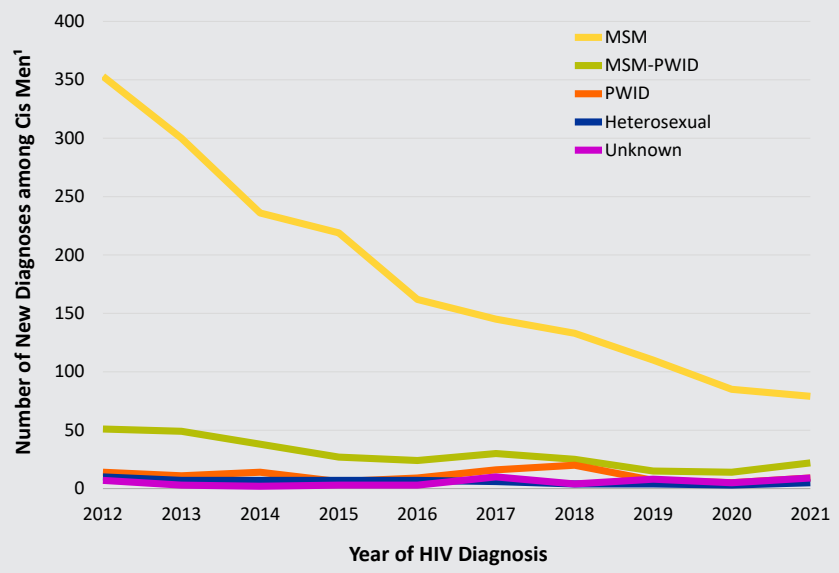


1 See Technical Notes "HIV Case Rates and HIV Mortality Rates." Includes people with HIV by year of their initial HIV diagnosis. Rates for Native Americans and multi-racial new diagnoses are not calculated due to small numbers.

Transmission category

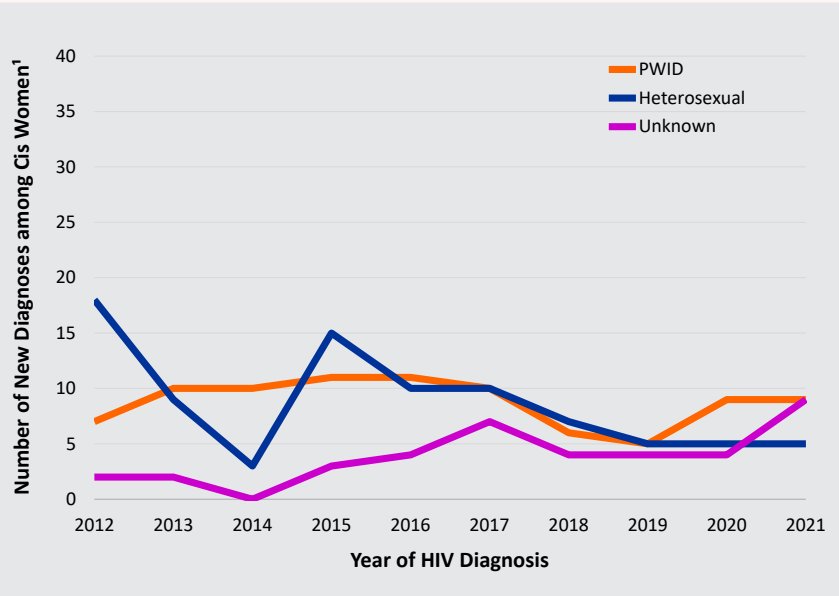
- The majority of cis men newly diagnosed with HIV during 2012 through 2021 were MSM (non-PWID).
- The annual number of MSM diagnoses was 353 in 2012 and declined each year after.
- MSM-PWID diagnoses declined more gradually during this time period compared to MSM (non-PWID), from 51 in 2012 to 22 in 2021.
- Diagnoses in male heterosexual PWID from 2012 to 2021 was highest in 2018 (20 diagnoses).
- The absolute number of annual diagnoses for cis men in all transmission categories (including unknown) declined in 2020, likely due to the impact of the COVID-19 pandemic.
- However in 2021, all cis men transmission categories, except for MSM (non-PWID), increased in absolute number compared to 2020.
- Overall, the number of cis women newly diagnosed with HIV due to heterosexual contact declined during 2012 to 2019 and has been steady for the last three years.
- Diagnoses of cis women PWID increased in 2020 and were level in 2020-2021.

Figure 2.4 Number of cis men newly diagnosed with HIV by transmission category, 2012-2021, San Francisco



1 Includes people with HIV by year of their initial HIV diagnosis.

Figure 2.5 Number of cis women newly diagnosed with HIV by transmission category, 2012-2021, San Francisco



1 Includes people with HIV by year of their initial HIV diagnosis.

Age

- Diagnoses for cis men declined from 207 in 2017 to 124 in 2021, while diagnoses for cis women increased steadily from 2019 (14 diagnoses) to 2021 (23 diagnoses).
- Among cis men, the 30-39 age group consistently had the highest number of new diagnoses.
- The shift in cis men diagnoses towards older age groups may be an impact of indications of higher PrEP uptake among younger cis men (see Section 16 Pre-Exposure Prophylaxis).
- Among cis women and due to the low numbers of new diagnoses, the age group with the highest annual number of new diagnoses fluctuated among the 40-49, 30-39, and 25-29 age groups.
- During this time period there were no new diagnoses in those under 13 years of age.

Table 2.1 Number of people newly diagnosed with HIV by gender[1] and age at diagnosis, 2017-2021, San Francisco

		Year of Initial HIV Diagnosis[2]				
		2017	2018	2019	2020	2021
		Number (%)				
Cis Men (Age in years)	0 - 12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	13 - 17	1 (<1)	1 (1)	0 (0)	0 (0)	0 (0)
	18 - 24	22 (11)	28 (15)	12 (8)	17 (15)	10 (8)
	25 - 29	39 (19)	42 (23)	24 (17)	19 (17)	19 (15)
	30 - 39	76 (37)	54 (29)	52 (36)	34 (30)	45 (36)
	40 - 49	38 (18)	39 (21)	25 (17)	20 (18)	26 (21)
	50+	31 (15)	22 (12)	31 (22)	22 (20)	24 (19)
	Cis Men Total	**207**	**186**	**144**	**112**	**124**
Cis Women (Age in years)	0 - 12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	13 - 17	2 (7)	0 (0)	0 (0)	0 (0)	0 (0)
	18 - 24	3 (11)	2 (12)	2 (14)	0 (0)	1 (4)
	25 - 29	1 (4)	0 (0)	0 (0)	3 (17)	7 (30)
	30 - 39	5 (19)	7 (41)	7 (50)	6 (33)	6 (26)
	40 - 49	9 (33)	3 (18)	3 (21)	4 (22)	4 (17)
	50+	7 (26)	5 (29)	2 (14)	5 (28)	5 (22)
	Cis Women Total	**27**	**17**	**14**	**18**	**23**

1 Data on trans women and trans men by age are not presented due to small numbers and potential small population.
2 See Technical Notes "Date of Initial HIV Diagnosis."

3 Spectrum of Engagement in HIV Prevention and Care

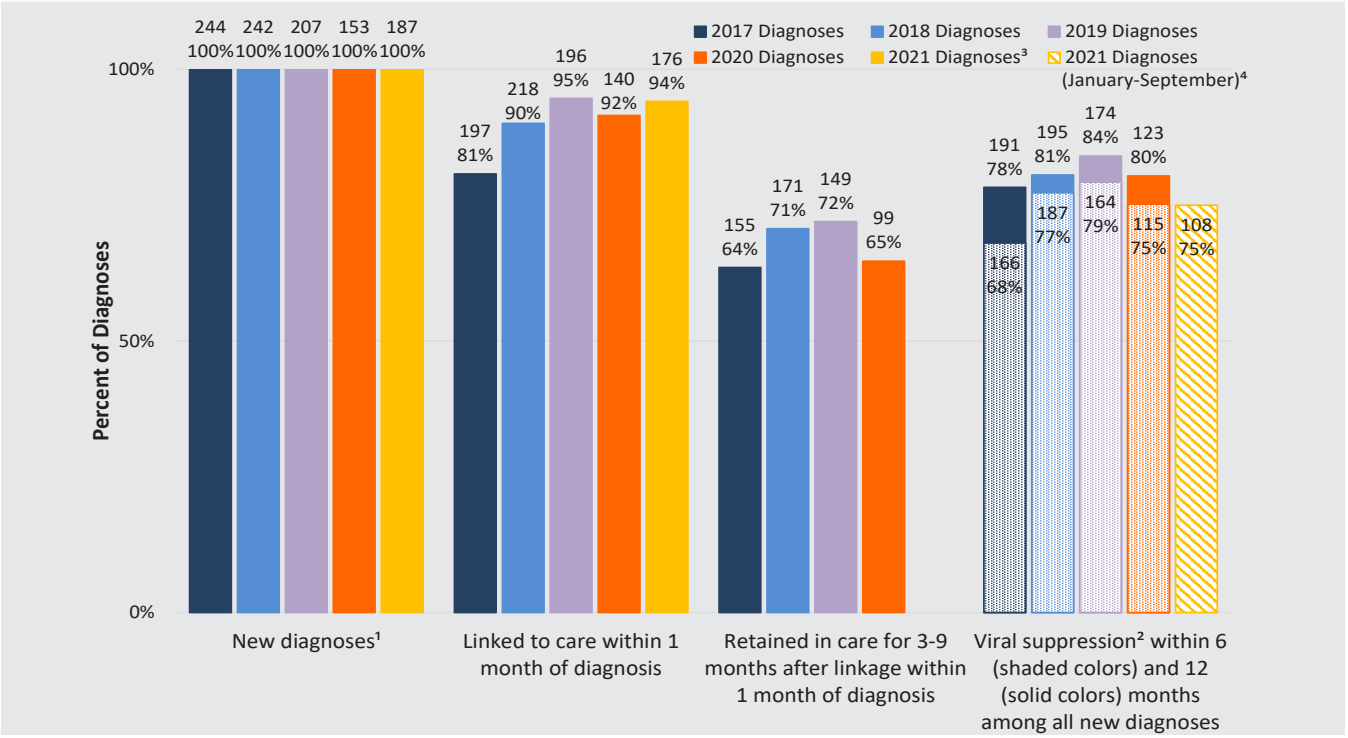
Continuum of HIV care among people newly diagnosed with HIV

- From 2017 through 2021, the proportion of newly diagnosed people who entered care within one month of diagnosis ranged from 81% to 95%.
- Not all people who entered care continued to receive care; 64%-72% of people diagnosed in 2017 to 2020 remained in care three to nine months after initial linkage to care.
- The proportion of newly diagnosed people who achieved viral suppression within 6 months and 12 months of diagnosis showed an upward trend between 2017 and 2019 but declined in 2020; 75% of people diagnosed in 2020 were virally suppressed within six months and 80% were virally suppressed within 12 months.
- Between January and September 2021, 75% of people diagnosed were virally suppressed within six months.

94%
OF PEOPLE NEWLY DIAGNOSED IN 2021 ENTERED CARE WITHIN ONE MONTH

75%
OF PEOPLE NEWLY DIAGNOSED BETWEEN JANUARY AND SEPTEMBER 2021 ACHIEVED VIRAL SUPPRESSION WITHIN SIX MONTHS

Figure 3.1 Continuum of HIV care among people newly diagnosed with HIV, 2017-2021, San Francisco

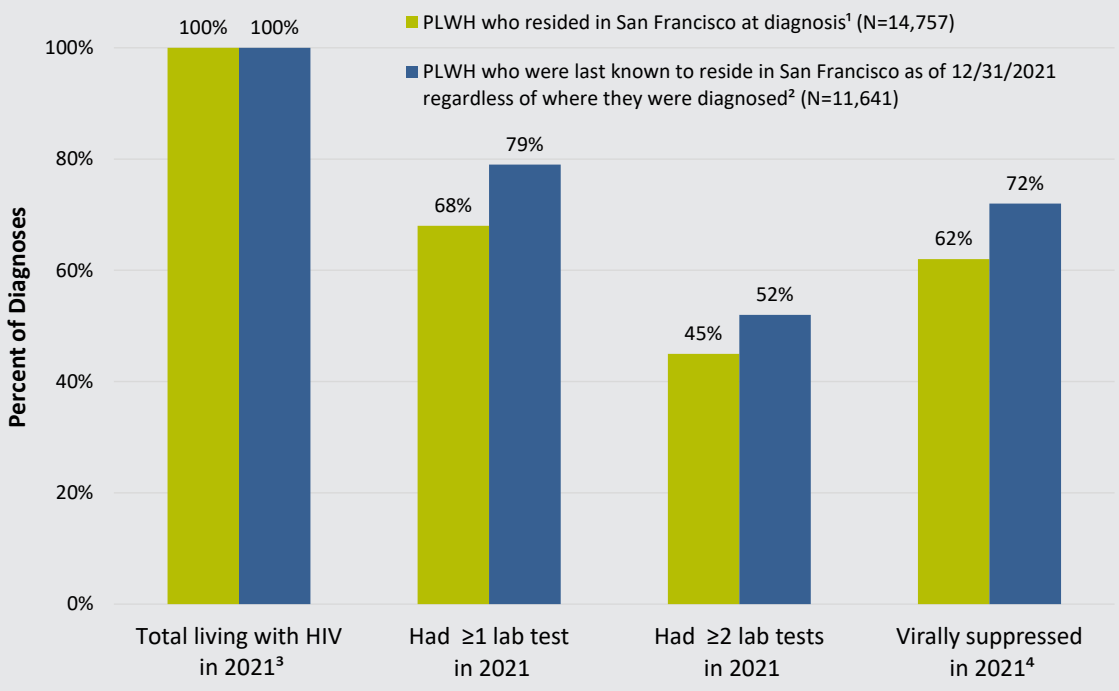


1 Number of new diagnoses shown each year is based on evidence of a confirmed HIV test and does not take into account self-report of HIV infection.
2 Defined as the latest viral load test within 6 and 12 months of HIV diagnosis <200 copies/mL. See Technical Notes "HIV Care Outcomes and Definitions."
3 Retention in care and viral suppression data are not available yet for the entire year of 2021.
4 People who were diagnosed between January and September 2021 (N=144) and virally suppressed within 6 months of HIV diagnosis.

Continuum of HIV care among people living with HIV

- Using data through the end of 2021, there were 14,757 people living with HIV (PLWH) who were diagnosed through December 31, 2020 and who resided in San Francisco at time of diagnosis. Of these, 68% had at least one CD4, viral load or genotype test (received care), 45% had two or more laboratory tests at least three months apart (retained in care), and 62% were virally suppressed in 2021.
- Of the 11,641 PLWH who resided in San Francisco based on their most recent address (8,710 San Francisco residents at diagnosis and still in San Francisco, 2,931 out-of-jurisdiction (OOJ) residents at diagnosis who moved to San Francisco after diagnosis), 79% received care, 52% were retained in care, and 72% were virally suppressed in 2021.

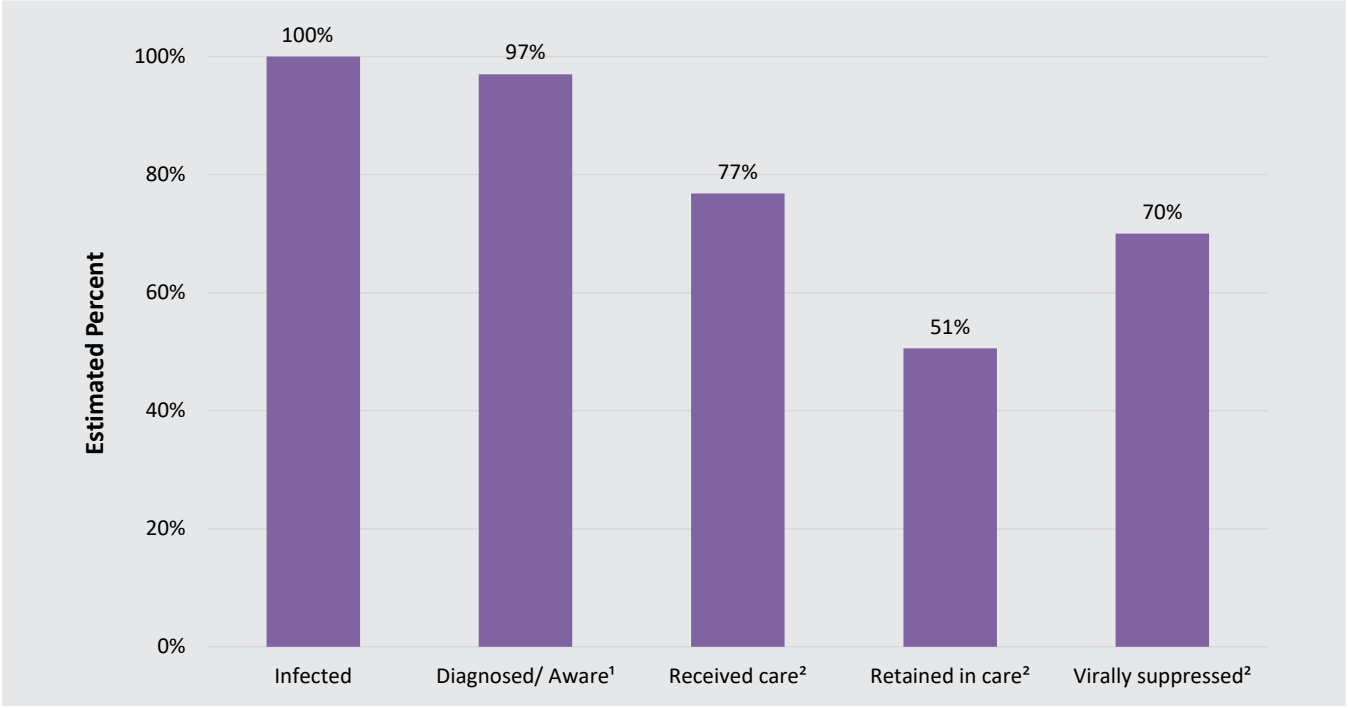
Figure 3.2 Continuum of HIV care among people living with HIV, 2021, San Francisco



1 Excludes people who were non-San Francisco residents at time of HIV diagnosis but San Francisco residents at HIV stage 3 (AIDS) diagnosis.
2 See Technical Notes "Residence and Receipt of Care for PLWH."
3 Includes people living with HIV at the end of 2021 (≥ 13 years old) and diagnosed by the end of 2020.
4 Defined as the latest viral load in 2021 <200 copies/mL.

- Among all PLWH (included those diagnosed and the estimated number of undiagnosed), it is estimated that 97% were aware of their HIV diagnosis, 77% received care, 51% were retained in care, and 70% were virally suppressed in 2021.

Figure 3.3 Continuum of HIV care among people living with diagnosed or undiagnosed HIV infection, 2021, San Francisco



1 The estimated percent aware of HIV diagnosis for San Francisco was based on 2020 and derived from the CD4 depletion model. See Technical Notes "CD4-based Model."

2 The estimated percent received care, retained in care, and virally suppressed among all PLWH (diagnosed and undiagnosed) was derived by applying the 97% diagnosed/aware to the 79% who had ≥1 lab tests, 52% who had ≥2 lab tests, and 72% who were virally suppressed among people living with diagnosed HIV who were last known to reside in San Francisco as shown in Figure 3.2, respectively.

Trends in HIV care and prevention indicators

- The proportion of late-stage HIV diagnosis, defined as a person who developed HIV disease stage 3 (AIDS) within three months of initial HIV diagnosis, fluctuated from 19% in 2017 to 15% in 2021.
- The proportion of linkage to care within one month of diagnosis increased from 81% in 2017 to 95% in 2019 and decreased slightly in 2020 (92%) and 2021 (94%), possibly due to the effect of COVID-19 on receipt of health care.
- The median time from HIV diagnosis to viral suppression decreased from 68 days in 2017 to 46 days in 2020.
- All care indicators from diagnosis to viral suppression improved over time including time from HIV diagnosis to first care (from 3 days in 2017 to 1 day in 2020), time from receipt of care to antiretroviral therapy (ART) initiation (from 2 days in 2017 to 0 day in 2020), and time from ART initiation to viral suppression (from 52 days in 2017 to 42 days in 2020).
- Among PLWH who resided in San Francisco based on their last known address at the end of each year, the proportion of those who received care (81%), as well as the proportion of those who were virally suppressed (74%-75%), was relatively stable from 2017 to 2019, and decreased in 2020 and 2021 (77% and 79% received care, 71% and 72% were virally suppressed, respectively).

Table 3.1 Care and prevention indicators among people newly diagnosed with HIV and living with HIV, 2017-2021, San Francisco

		Year				
		2017	2018	2019	2020	2021
Indicators	**New HIV diagnoses[1]**	**N=244**	**N=242**	**N=207**	**N=153**	**N=187**
	Proportion developed HIV stage 3 (AIDS) within 3 months of diagnosis	19%	17%	15%	17%	15%
	Proportion linked to care within 1 month of diagnosis	81%	90%	95%	92%	94%
	Proportion virally suppressed[2] within 12 months of diagnosis	78%	81%	84%	80%	NA
	Median time (days) from HIV diagnosis to first viral suppression	68	46	41	46	NA
	Median time (days) from HIV diagnosis to first care	3	1	1	1	NA
	Median time (days) from first care to ART initiation[3]	2	1	0	0	NA
	Median time (days) from ART initiation to first viral suppresssion[3]	52	38	40	42	NA
	People living with HIV[4] (≥13 years old)	**N=12,763**	**N=12,431**	**N=12,275**	**N=11,990**	**N=11,641**
	Proportion of cases who had ≥1 CD4/viral load test	81%	81%	81%	77%	79%
	Proportion received ≥2 tests among those with ≥1 test	74%	72%	72%	61%	66%
	Proportion virally suppressed[2] among living cases	74%	75%	75%	71%	72%
	Proportion virally suppressed among those with ≥1 viral load test	92%	93%	93%	94%	94%

1 Includes people diagnosed each year based on a confirmed HIV test and does not take into account self-report of HIV infection.
2 Defined as the latest viral load test within 12 months of HIV diagnosis <200 copies/mL. Viral suppression among PLWH is measured using the latest test in the year.
3 Calculation is limited to people diagnosed with HIV who were known to have started ART. See Technical Notes "Estimate of ART Use."
4 Includes PLWH who were alive and resided in San Francisco as of the end of each year and diagnosed as of the previous year. See Technical Notes "Residence and Receipt of Care for PLWH."

Care indicators among people with HIV by demographic and risk characteristics

- There were noticeable differences in care outcomes among people diagnosed with HIV in 2020 by demographic and risk characteristics.
- The proportions of all three care indicators, linkage to care, retention in care, and viral suppression (six and 12 months), were lower among Black/African Americans, people who inject drugs (PWID), and people experiencing homelessness at diagnosis.
- In addition, cis men and people aged 13-29 years had a lower proportion of linkage to care. Cis women, Asian/Pacific Islanders (APIs), people aged 30-39 years, and MSM-PWID had a lower proportion of viral suppression within both six and 12 months of diagnosis.

Table 3.2 Care indicators[1] among people newly diagnosed with HIV in 2020 by demographic and risk characteristics, San Francisco

		Number of diagnoses[2]	% Linked to care within 1 month of diagnosis[3]	% Retained in care 3-9 months after linkage[3]	% Virally suppressed within 6 months of diagnosis[3]	% Virally suppressed within 12 months of diagnosis[3]
	Total	**153**	**92%**	**65%**	**75%**	**80%**
Gender[4]	Cis Men	126	90%	65%	79%	83%
	Cis Women	18	94%	56%	44%	61%
	Trans Women	8	100%	75%	88%	88%
Race/Ethnicity	White	45	89%	53%	73%	82%
	Black/African American	27	89%	52%	63%	63%
	Latinx	61	93%	77%	87%	90%
	Asian/Pacific Islander	17	94%	71%	65%	71%
	Other/Unknown	3	100%	67%	33%	67%
Age at Diagnosis (Years)	13-24	17	88%	71%	76%	82%
	25-29	25	88%	72%	76%	76%
	30-39	50	92%	62%	74%	78%
	40-49	32	94%	66%	75%	84%
	50+	29	93%	59%	76%	83%
Transmission Category	MSM	97	91%	69%	84%	85%
	PWID	16	88%	44%	56%	69%
	MSM-PWID	15	93%	53%	53%	67%
	Heterosexual	8	88%	75%	63%	88%
	Other/Unidentified[5]	17	100%	65%	71%	76%
Housing Status at Diagnosis	Homeless	29	83%	45%	52%	66%
	Housed	121	93%	69%	80%	83%
	Unknown	3	100%	100%	100%	100%
Country of Birth	US/US Dep.	70	90%	57%	73%	80%
	Non-US	46	91%	74%	89%	91%
	Unknown	37	95%	68%	62%	68%

1 See Technical Notes "HIV Care Outcomes and Definitions."
2 Includes people diagnosed in 2020 based on a confirmed HIV test and does not take into account self-report of HIV infection.
3 Percent of total diagnoses.
4 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
5 Includes TWSM, TWSM-PWID and people with no identified risk factor.

- Among people diagnosed with HIV in the entire 2021, cis women, trans women, Black/African Americans, people aged 13-29 years, 50 years and order, heterosexuals, and people experiencing homelessness had lower proportions of linkage to care with one month of diagnosis.
- Among people diagnosed in the first three quarters of 2021, the proportion of viral suppression is lowest among cis women, whites, people aged 25-29 years, PWID, and people experiencing homelessness at diagnosis.

Table 3.3 Care indicators[1] among people newly diagnosed with HIV in 2021 by demographic and risk characteristics, San Francisco

		Number of diagnoses[2]	% Linked to care within 1 month of diagnosis[3]	% Virally suppressed within 6 months of diagnosis among people diagnosed in January-September 2021 (N=144)
	Total	**187**	**94%**	**75%**
Gender[4]	Cis Men	149	95%	78%
	Cis Women	24	88%	64%
	Trans Women	13	92%	67%
Race/Ethnicity	White	62	95%	65%
	Black/African American	28	86%	78%
	Latinx	73	95%	83%
	Asian/Pacific Islander	19	100%	73%
	Other/Unknown	5	100%	75%
Age at Diagnosis (Years)	13-24	13	92%	100%
	25-29	33	91%	63%
	30-39	70	97%	78%
	40-49	40	95%	74%
	50+	31	90%	73%
Transmission Category	MSM	105	97%	84%
	PWID	18	94%	46%
	MSM-PWID	22	95%	72%
	Heterosexual	10	90%	78%
	Other/Unidentified[5]	32	84%	63%
Housing Status at Diagnosis	Homeless	40	93%	57%
	Housed	140	95%	80%
	Unknown	7	86%	75%
Country of Birth	US/US Dep.	89	97%	68%
	Non-US	55	95%	88%
	Unknown	43	88%	75%

1 See Technical Notes "HIV Care Outcomes and Definitions." Retention in care and viral suppression data are not available yet for the entire year of 2021.
2 Includes people diagnosed in 2021 based on a confirmed HIV test and does not take into account self-report of HIV infection.
3 Percent of total diagnoses.
4 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
5 Includes TWSM, TWSM-PWID and people with no identified risk factor.

- Among PLWH who were San Francisco residents as of the end of 2021, 72% were virally suppressed; among those who received care in 2021, 91% were virally suppressed.
- The proportion who were virally suppressed was lower among cis women, trans women, Black/African Americans, people younger than 50 years, PWID (including MSM-PWID and TWSM-PWID), heterosexuals, and people experiencing homelessness.

Table 3.4 Care indicators among people living with HIV in 2021 who were known to reside in San Francisco as of the end of 2021, by demographic and risk characteristics

		Number of people living with HIV[1]	% with >= 1 laboratory test in 2021[2]	% with >= 2 laboratory tests in 2021[2]	% Virally suppressed (most recent viral load test in 2021 <200 copies/mL) among all people living with HIV	% Virally suppressed (most recent viral load test in 2021 <200 copies/mL) among those with >= 1 laboratory test in 2021
	Total	**11,641**	**79%**	**52%**	**72%**	**91%**
Gender[3]	Cis Men	10,544	79%	51%	72%	91%
	Cis Women	698	80%	55%	66%	83%
	Trans Women	390	83%	59%	71%	86%
Race/Ethnicity	White	5,956	80%	51%	73%	91%
	Black/African American	1,512	80%	55%	68%	85%
	Latinx	2,821	76%	51%	70%	92%
	Asian/Pacific Islander	820	76%	52%	72%	94%
	Other/Unknown	532	85%	52%	76%	89%
Age in Years (as of 12/31/2021)	13-24	50	86%	52%	76%	88%
	25-29	263	76%	50%	65%	86%
	30-39	1,531	76%	45%	66%	86%
	40-49	2,067	76%	47%	67%	88%
	50-59	3,712	78%	51%	71%	91%
	60-69	2,860	82%	58%	77%	93%
	70+	1,158	82%	59%	77%	95%
Transmission Category	MSM	8,349	79%	52%	74%	93%
	TWSM	236	87%	62%	76%	88%
	PWID	655	77%	52%	64%	82%
	MSM-PWID	1,514	80%	51%	68%	86%
	TWSM-PWID	151	77%	54%	64%	83%
	Heterosexual	469	79%	52%	68%	86%
	Other/Unidentified	267	62%	42%	54%	87%
Housing Status, Most Recent	Homeless	288	41%	30%	27%	66%
	Non-Homeless[4]	11,353	80%	52%	73%	91%
Country of Birth	US/US Dep.	8,057	81%	53%	73%	90%
	Non-US	2,313	70%	49%	67%	95%
	Unknown	1,271	79%	49%	72%	90%

1 Includes San Francisco residents living with HIV as of the end of 2021 (≥13 years old) and diagnosed by the end of 2020. See Technical Notes "Residence and Receipt of Care for PLWH."
2 Percent of total PLWH.
3 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
4 Includes people whose most recent residence in San Francisco was unknown.

- From January 1, 2020 through December 31, 2020, 84 PLWH received Linkage Integration Navigation Comprehensive Services (LINCS; see Technical Notes "Linkage Integration Navigation Comprehensive Services"). This number was lower than the 2019 total (N=141) due to the pandemic decreasing staff availability and complicating efforts to locate patients.
- Overall, 86% of people who received services had verified linkage to care in the form of a viral load, CD4 test, or genotyping test within three months of LINCS initiation.
- Sixty-seven percent of people who received services had an additional viral load, CD4 test, or genotyping test in the three to nine months after linkage, indicating retention in care.
- Sixty-seven percent of people who received services showed evidence of viral suppression from their most recent viral load test within 12 months after LINCS initiation.
- Cis men, APIs, people aged 13-29 years, MSM, and housed people had highest proportions of care linkage. Trans women, Black/African Americans, people aged 13-24 years, MSM, and housed people had the highest proportions of retention in care. Cis men, APIs, people aged 13-24 years, PWID, and housed people had higher proportions of viral suppression after receiving LINCS services.

Table 3.5 Care indicators among people who accepted and completed LINCS services in 2020 by demographic and risk characteristics, San Francisco

		Number of received LINCS	% Linked to care within 3 months of LINCS initiation[1]	% Retained in care 3-9 months after linkage[1]	% Virally suppressed at most recent test in 12 months after LINCS initiation[1]
	Total	**84**	**86%**	**67%**	**67%**
Gender[2]	Cis Men	63	89%	67%	70%
	Cis Women	9	67%	56%	67%
	Trans Women	12	83%	75%	50%
Race/Ethnicity	White	26	88%	58%	65%
	Black/African American	23	83%	78%	61%
	Latinx	26	88%	73%	69%
	Asian/Pacific Islander	4	100%	50%	75%
	Other/Unknown	5	60%	40%	80%
Age in Years (as of 12/31/2020)	13-24	2	100%	100%	100%
	25-29	5	100%	80%	40%
	30-39	34	88%	76%	59%
	40-49	22	82%	55%	73%
	50+	21	81%	57%	76%
Transmission Category	MSM	35	91%	77%	74%
	PWID	9	78%	44%	78%
	MSM-PWID	20	85%	50%	55%
	Heterosexual	4	75%	75%	75%
	Other/Unidentified[3]	16	81%	75%	56%
Housing Status[4]	Homeless	53	83%	66%	62%
	Housed	31	90%	68%	74%

1 Percent of people who received LINCS.
2 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
3 Includes TWSM, TWSM-PWID and people with no identified risk factor.
4 Housing status is based on the most recent residence at time of LINCS initiation in 2020.

HIV prevention and care indicators in San Francisco, California and the United States

- Awareness of ones HIV status in San Francisco is high (97%) compared to all Californians (88%) and the U.S. population (87%) using national data sources.
- Pre-exposure prophylaxis (PrEP) coverage is very high (75%) in San Francisco compared to California (26%) and the U.S. (25%).
- The proportion of late HIV diagnosis in 2020 was lower in San Francisco (17%) than in California (21%) and the U.S. (22%).
- The proportions of PLWH who received care and were virally suppressed in 2020 were higher in San Francisco than in California and the U.S.
- The 2020 death rate per 1,000 people with HIV in San Francisco (17.5) was higher than in California (13.1) and about the same as in the U.S. (17.0).

Table 3.6 Comparison of HIV prevention and care indicators for San Francisco, California, and the United States, 2020

		San Francisco 2020	California[1] 2020	United States[1] 2020
Indicators	**Awareness of HIV status**			
	Estimated % people living with HIV who know their serostatus	97%	88% (2019[2])	87% (2019[2])
	Pre-exposure prophylaxis coverage[1,3]			
	Estimated % people with PrEP indications who have been prescribed PrEP	75%	26%	25%
	Late HIV diagnosis			
	% people diagnosed with AIDS within 3 months of HIV diagnosis	17%	21%	22%
	HIV care access and outcome			
	% newly diagnosed people linked to care within 1 month of HIV diagnosis	92%	83%	82%
	% newly diagnosed people virally suppressed within 6 months of HIV diagnosis	75%	67%	68%
	% PLWH who are in care (≥1 laboratory tests)	77%	74%	74%
	% PLWH who are virally suppressed	71%	65%	65%
	HIV mortality			
	Death rate per 1,000 people with HIV (all stages) diagnosis	17.5	13.1	17.0
	Death rate per 1,000 people with HIV stage 3 (AIDS) diagnosis	23.6	20.0	25.4

1 CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2020. HIV Surveillance Supplemental Report 2022;27(No. 3). http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published May 2022.

2 CDC. Estimated HIV incidence and prevalence in the United States, 2015–2019. HIV Surveillance Supplemental Report 2021;26(No. 1). http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html. Published May 2021.

3 PrEP coverage, reported as a percentage, is defined as the number of people aged ≥16 years classified as having been prescribed PrEP during the specified year divided by the estimated number of people aged ≥16 years who had indications for PrEP during the specified year.

Use of antiretroviral therapy

- People with a medical record indicating that they were prescribed ART were assumed to have received and used it (see Technical Notes "Estimate of ART Use"). Overall, 91%-98% of PLWH received ART. ART use was lower among people experiencing homelessness.
- Among 153 people newly diagnosed with HIV in 2020, 87% received ART. ART use was lower among cis women, Black/African Americans, APIs, people aged 30-39 years and 50 years and older at time of diagnosis, PWID, people experiencing homelessness, and those with no insurance at diagnosis.

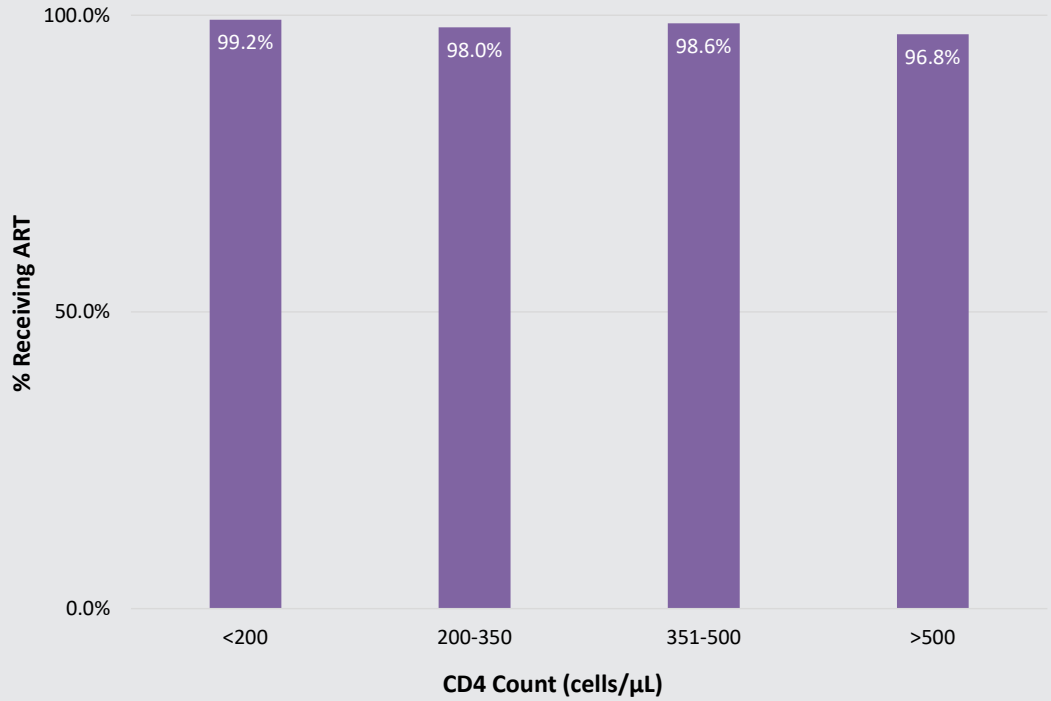
Table 3.7 Estimate of ART use among people living with HIV as of December 2021 and diagnosed in 2020 by demographic and risk characteristics, San Francisco

		People living with HIV[1], December 2021 Percent receiving ART, ever		People newly diagnosed with HIV[1], 2020 Percent receiving ART
		Lower level estimate (N=14,943)	Upper level estimate (N=2,992)	(N=153)
	Overall	**91%**	**98%**	**87%**
Gender[2]	Cis Men	91%	98%	90%
	Cis Women	92%	97%	67%
	Trans Women	91%	97%	88%
Race/Ethnicity	White	92%	99%	89%
	Black/African American	89%	98%	74%
	Latinx	92%	98%	92%
	Asian/Pacific Islander	90%	96%	82%
	Other/Unknown	89%	98%	100%
Age[3]	13 - 24	94%	93%	88%
	25 - 29	93%	95%	100%
	30 - 39	88%	96%	80%
	40 - 49	88%	98%	94%
	50 +	93%	99%	79%
Transmission Category	MSM	92%	99%	91%
	PWID	87%	96%	56%
	MSM-PWID	92%	97%	93%
	Heterosexual	96%	99%	88%
	Other/Unidentified[4]	84%	96%	88%
Housing Status[5]	Homeless	66%	88%	62%
	Non-Homeless	92%	98%	93%
Insurance at Diagnosis	Private	95%	99%	100%
	Public	93%	98%	87%
	None	88%	98%	77%

1 Excludes people who did not reside in San Francisco at time of HIV diagnosis but resided in San Francisco at time of HIV stage 3 (AIDS) diagnosis.
2 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
3 Age as of December 31, 2021 for PLWH. Age at HIV diagnosis for people newly diagnosed with HIV.
4 Includes TWSM, TWSM-PWID and people with no identified risk factor.
5 Housing status is based on the most recent residence as of December 31, 2021 for PLWH and the residence at HIV diagnosis for people newly diagnosed with HIV. Non-homeless PLWH include people whose most recent residence were unknown or in other jurisdiction. Non-homeless people newly diagnosed with HIV include people whose residence at HIV diagnosis was unknown.

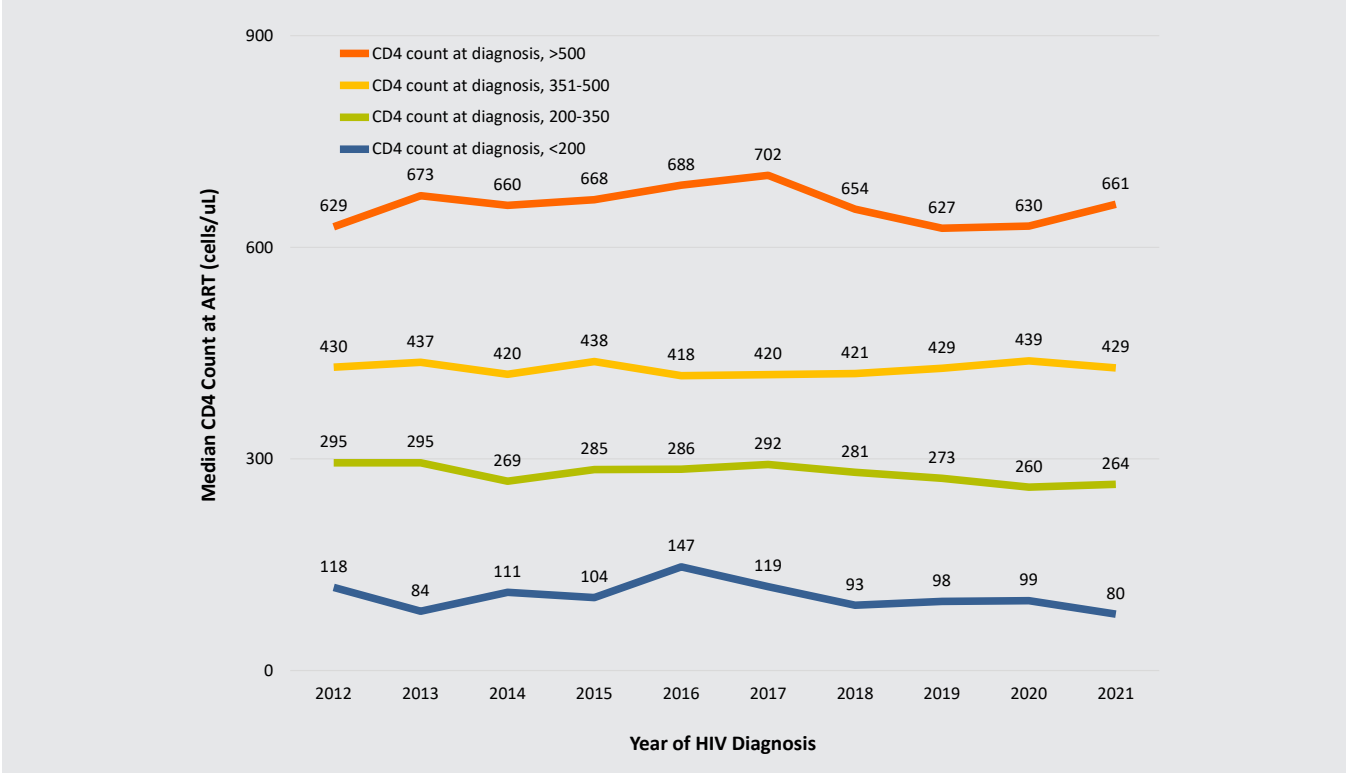
- The proportion of PLWH who received ART was slightly lower among people with a nadir CD4 count above 500: 99.2% among those with a nadir CD4 count below 200 cells/μL, 98.0% among those with a nadir CD4 count between 200-350 cells/μL, 98.6% among those with a nadir CD4 count between 351-500 cells/μL, and 96.8% among those with a nadir CD4 count above 500 cells/μL.

Figure 3.4 Estimate of ART use among people living with HIV and with chart review, by nadir CD4 level, December 2021, San Francisco



- Among people newly diagnosed with HIV between 2012 and 2021 whose CD4 count at diagnosis was >500 cells/μL, the median CD4 count at ART initiation increased from 629 cells/μL in 2012 to a high of 702 cells/μL in 2017, then decreased to a low of 627 cells/μL in 2019 and then increased to 661 cells/μL in 2021.
- Among people whose CD4 count at diagnosis was between 200 and 500 cells/μL, the median CD4 count at ART initiation remained relatively stable over time.
- The median CD4 count at ART initiation among people whose CD4 count at diagnosis was <200 cells/μL fluctuated between 84 and 147 cells/μL during 2012 and 2018, was relatively stable between 2018 and 2020 (93-99 cells/μL), and decreased in 2021 (80 cells/μL).

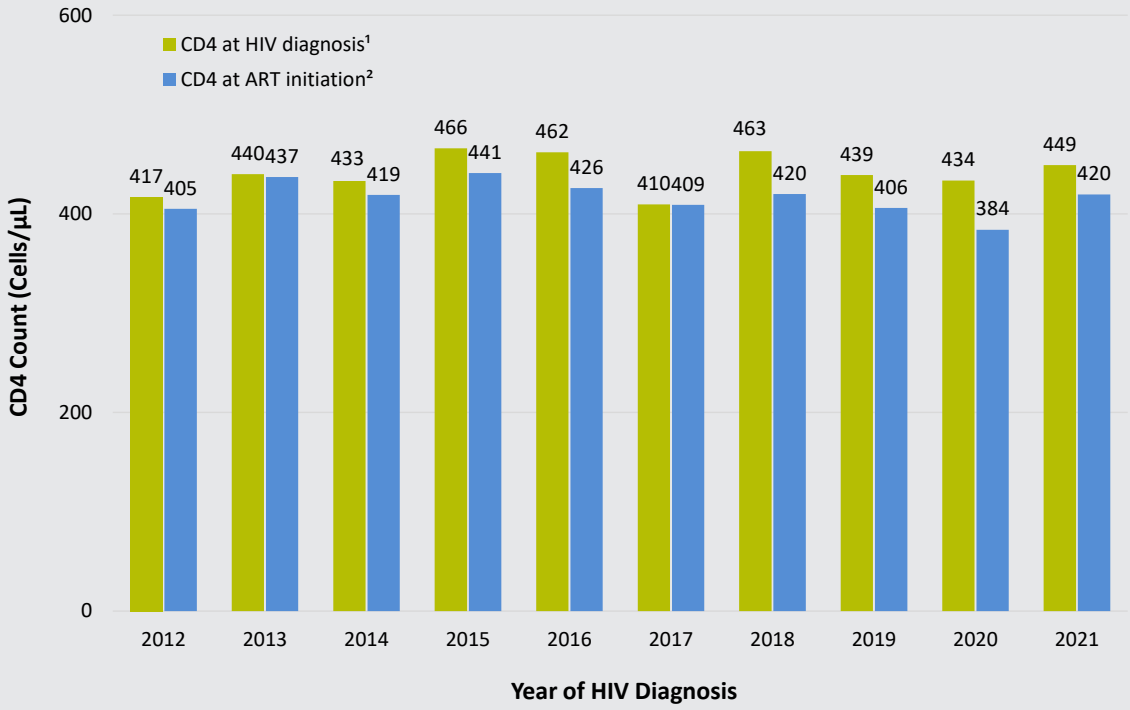
Figure 3.5 Trends in median CD4 count at time of ART initiation[1] by CD4 count at time of diagnosis, 2012-2021, San Francisco



1 Median CD4 count at ART initiation was calculated among people who started ART and whose CD4 count at HIV diagnosis and CD4 count at ART initiation were available (N=2,064). ART data collection for those diagnosed in 2021 may be incomplete.

- Among people newly diagnosed with HIV from 2012 through 2021, the median CD4 count at HIV diagnosis fluctuated between 410 cells/μL and 466 cells/μL.
- Among people newly diagnosed who started ART, the median CD4 count at ART initiation fluctuated between 2012 and 2021 and mostly followed the same trend in CD4 count at HIV diagnosis..
- The median CD4 count at ART initiation was the lowest in 2020 (384 cells/μL) which may be attributed in part to late diagnoses or delay in care due to the COVID-19 pandemic. In 2021, both CD4 count at diagnosis and CD4 count at ART initiation increased.

Figure 3.6 Trends in median CD4 count at time of diagnosis and at time of ART initiation among people newly diagnosed with HIV, 2012-2021, San Francisco



1 Median CD4 count at HIV diagnosis was calculated among people whose CD4 count at HIV diagnosis was available (N=2,522).

2 Median CD4 count at ART initiation was calculated among people who started ART and whose CD4 count at HIV diagnosis and CD4 count at ART initiation were available (N=2,064). ART data collection for those diagnosed in 2021 may be incomplete.

- Overall, 51% of people diagnosed with HIV between 2016 and 2020 who were in care started ART within seven days of diagnosis (rapid ART initiation), 23% started ART 8-30 days after diagnosis, 16% started ART more than 30 days after diagnosis, and 10% were not known to have started ART.
- The proportion of rapid ART initiation increased from 34% in 2016 to 68% in 2020.
- A lower proportion of rapid ART initiation was observed among cis women (45%), Whites (43%), Black/African Americans (49%), APIs (47%), people aged 40-49 years (49%), PWID (41%), MSM-PWID (45%), and people experiencing homelessness (43%).

Table 3.8 Time from HIV diagnosis to ART initiation among people diagnosed with HIV in 2016-2020 by demographic and risk characteristics, San Francisco

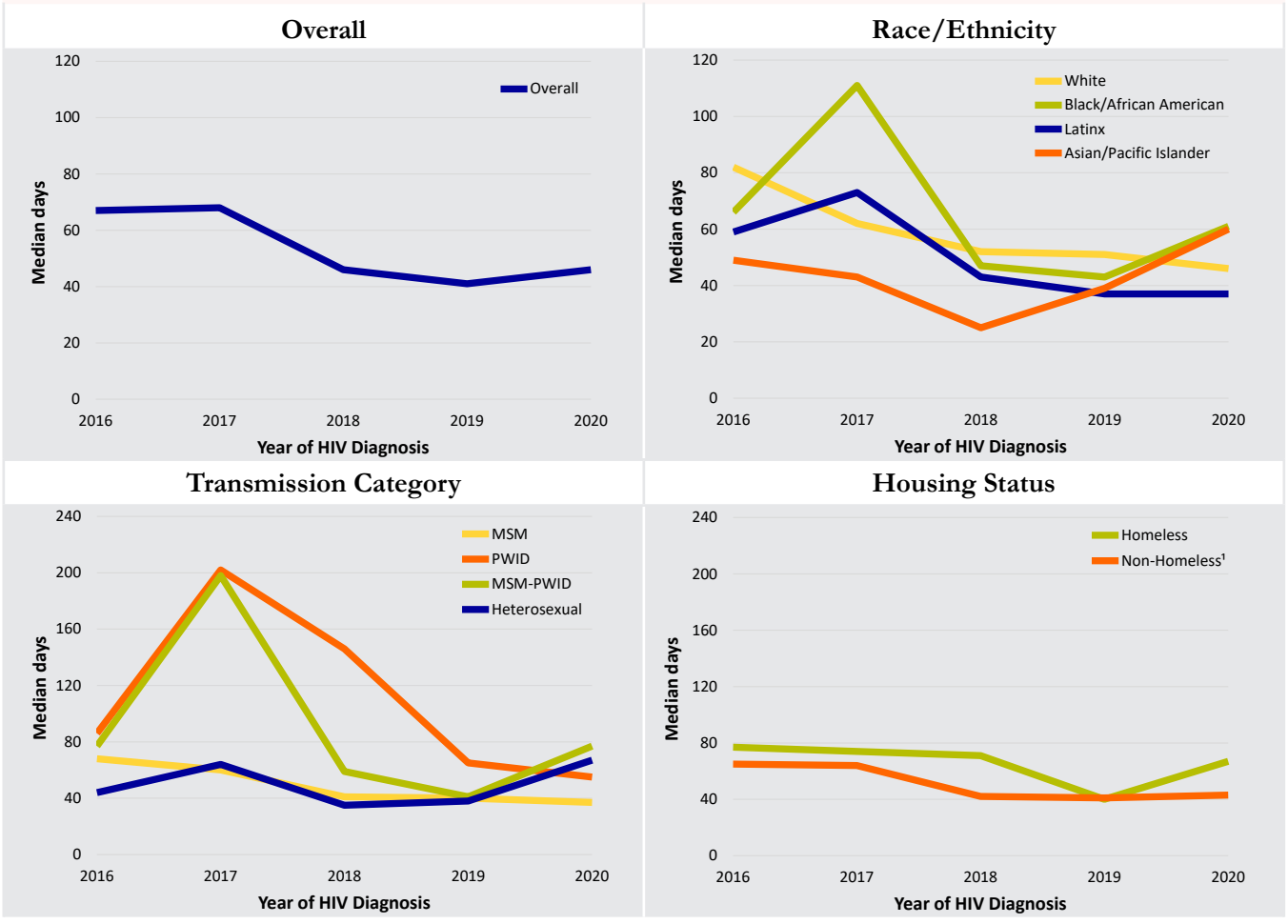
		Number of diagnoses[1]	% Started ART within 7 days of diagnosis	% Started ART 8-30 days after diagnosis	% Started ART > 30 days after diagnosis	% Not known to have started ART
	Total	**976**	**51%**	**23%**	**16%**	**10%**
Year of Diagnosis[2]	2016	230	34%	30%	30%	7%
	2017	214	43%	28%	21%	8%
	2018	215	56%	23%	10%	11%
	2019	178	62%	18%	8%	11%
	2020	139	68%	14%	5%	14%
Gender[3]	Cis Men	833	52%	23%	16%	10%
	Cis Women	100	45%	24%	22%	9%
	Trans Women	38	55%	26%	11%	8%
Race/Ethnicity	White	329	43%	26%	19%	12%
	Black/African American	157	49%	22%	20%	9%
	Latinx	324	60%	22%	10%	8%
	Asian/Pacific Islander	128	47%	25%	18%	10%
	Other/Unknown	38	58%	16%	21%	5%
Age at Diagnosis	13-24	109	57%	26%	13%	5%
	25-29	178	51%	28%	15%	6%
	30-39	336	50%	22%	17%	11%
	40-49	189	49%	22%	19%	11%
	50+	164	51%	21%	15%	13%
Transmission Category	MSM	619	53%	24%	14%	9%
	PWID	95	41%	15%	24%	20%
	MSM-PWID	108	45%	23%	24%	7%
	Heterosexual	65	52%	34%	9%	5%
	Other/Unidentified[4]	89	55%	22%	16%	7%
Housing Status at Diagnosis	Homeless	155	43%	18%	21%	18%
	Housed	794	53%	24%	15%	8%
	Unknown	27	41%	37%	11%	11%
Country of Birth	US	461	54%	23%	16%	8%
	Non-US	283	52%	25%	13%	10%
	Unknown	232	45%	22%	19%	13%
Insurance at Diagnosis	Private	368	51%	23%	17%	9%
	Public	312	54%	27%	13%	7%
	None	214	53%	18%	16%	13%
	Unknown	82	34%	26%	24%	16%

1 Excludes people who were not in care (N=12) or people who reported taking ART prior to diagnosis (N=112).
2 Year of diagnosis is based on a confirmed HIV test and does not take into account patient self-report of HIV infection.
3 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
4 Includes TWSM, TWSM-PWID and people with no identified risk factor.

Trends in time from HIV diagnosis to viral suppression

- Among people diagnosed with HIV who were virally suppressed, the median time from diagnosis to viral suppression has improved over time but differed by socio-demographic characteristics.
- By race/ethnicity, time from diagnosis to viral suppression decreased steadily between 2016 and 2020 among Whites; Black/African Americans had the highest median time in 2017 (111 days) and it has decreased by more than half since 2018 (47 days) but increased in 2020 (61 days). Latinx had stable median time until declining in 2018 to the lowest median time in 2020 (37 days). APIs had a lowest median time in 2018 (25 days) but increased since then to a level similar to that for Black/African Americans.
- By transmission category, MSM and heterosexuals had a similar median time from diagnosis to viral suppression which was lower than that for PWID and MSM-PWID from 2016-2019. The median time in 2020 increased among MSM-PWID and heterosexuals while that for MSM and PWID continue to decrease.
- By housing status, time to viral suppression among people experiencing homelessness was stable from 2016 to 2018, decreased significantly in 2019 but increased in 2020.

Figure 3.7 Trends in median time from HIV diagnosis to viral suppression by race/ethnicity, transmission category, and housing status, 2016-2020, San Francisco

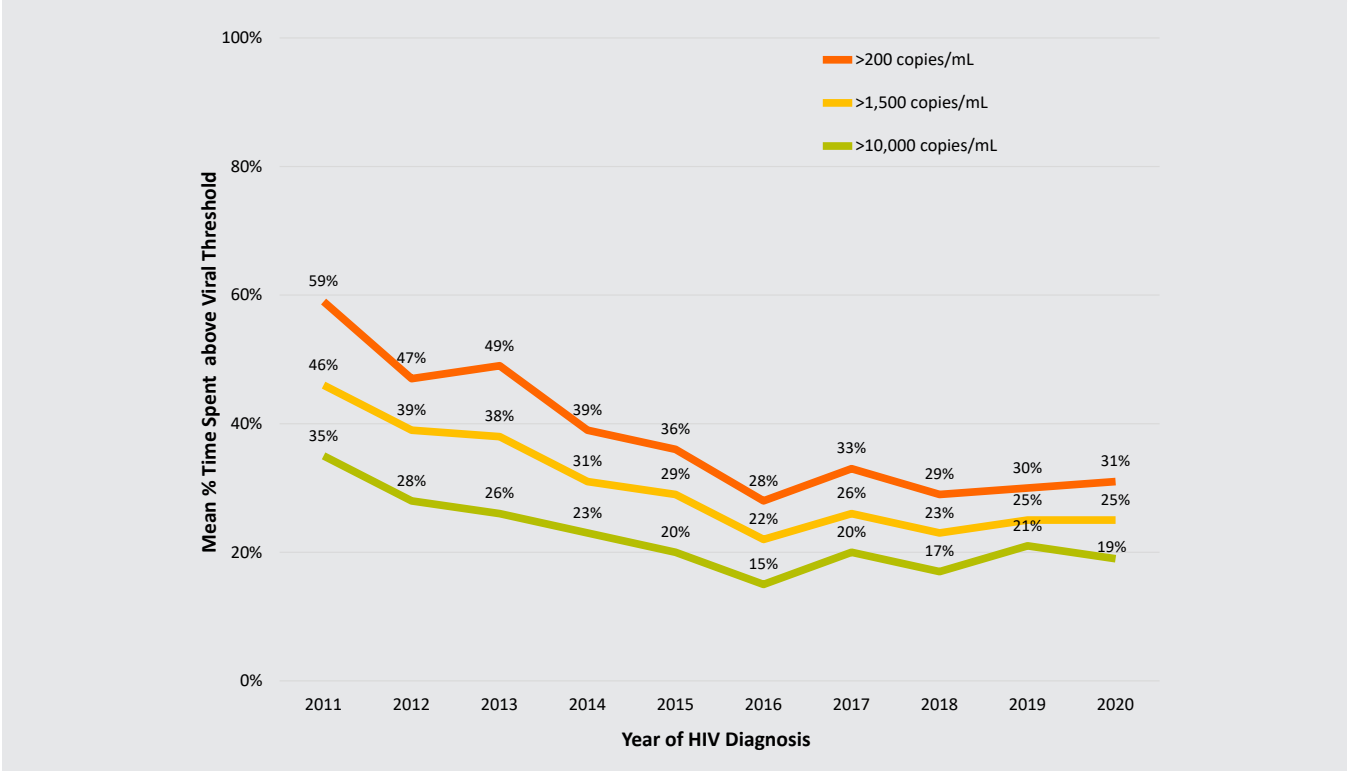


1 Includes people whose addresses at diagnosis were unknown.

Trends in time spent viremic after HIV diagnosis

- We used a measure called cumulative viral load to quantify the mean percent time spent above three viral thresholds (>200 copies/mL, >1,500 copies/mL, and >10,000 copies/mL) during the 12 months after HIV diagnosis (see Technical Notes "Cumulative Viral Load").
- The mean percent time spent >200 copies/mL during the 12 months after HIV diagnosis has decreased from 59% in 2011 to 31% in 2020.
- The mean percent time spent >1,500 copies/mL decreased from 46% in 2011 to 25% in 2020 and the mean percent time spent >10,000 copies/mL also decreased from 35% in 2011 to 19% in 2020.
- The time spent viremic for all three thresholds steadily declined from 2011 to 2016, with a more stable or slightly increasing time spent viremic from 2016 to 2020.
- Decrease in viremic levels over time suggests an overall trend towards early diagnosis and linkage to treatment among people newly diagnosed with HIV which may also contribute to reduced HIV transmission and lower HIV incidence.
- The slight increase in viremic levels in recent years may reflect challenges in HIV care retention and management in certain vulnerable populations with higher cumulative viral loads.

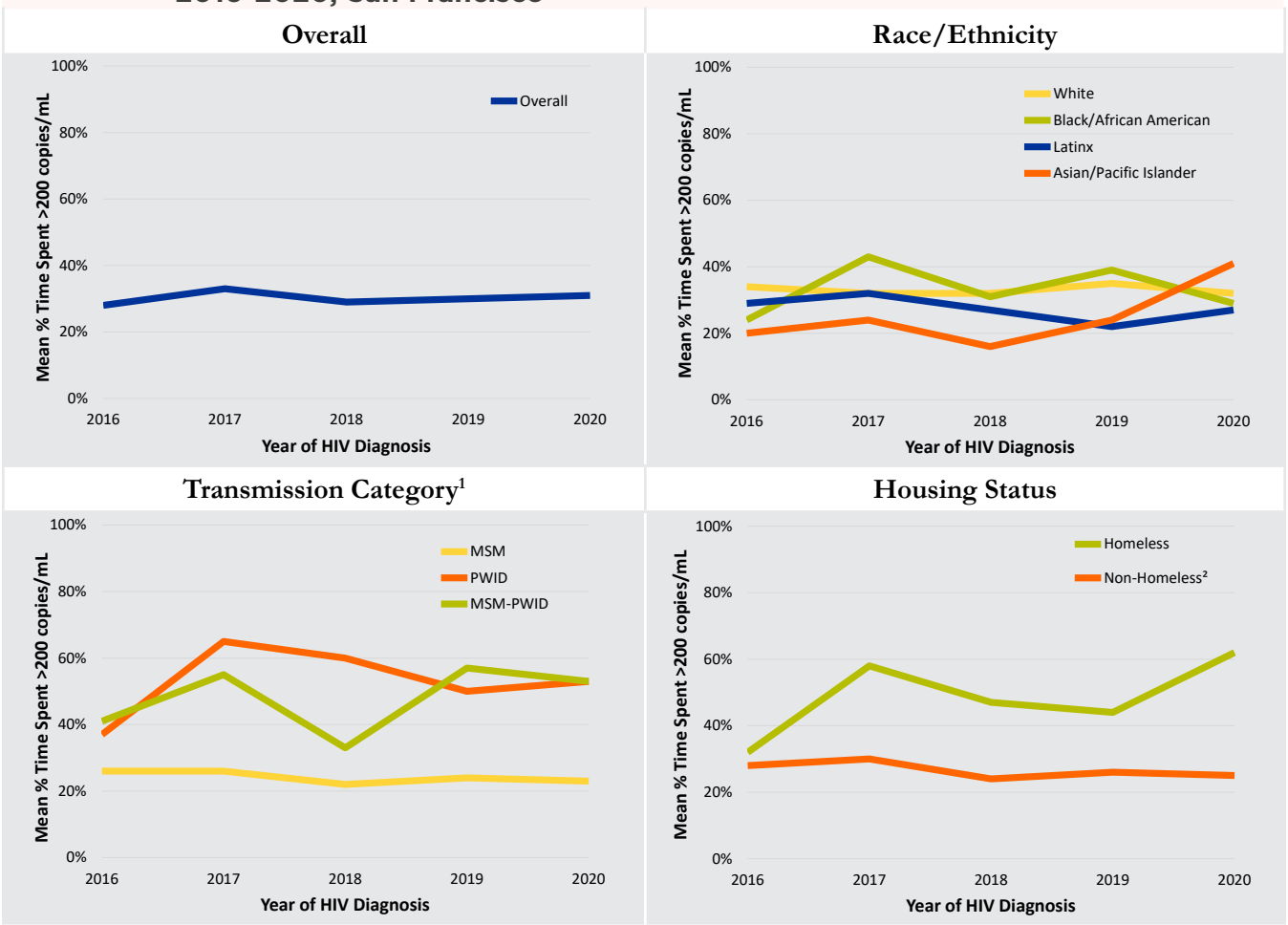
Figure 3.8 Trends in mean percent time spent above three viral thresholds[1] during the 12 months after HIV diagnosis, 2011-2020, San Francisco



1 Note these three groups are not mutually exclusive.

- The mean percent time spent >200 copies/mL during the 12 months after HIV diagnosis increased slightly from 28% in 2016 to 31% in 2020.
- By race/ethnicity, mean percent time spent >200 copies/mL decreased slightly from 2016 to 2020 for Latinx and Whites. The time spent >200 copies/mL increased slightly for Black/African Americans from 24% in 2016 to 29% in 2020, and increased for Asian/Pacific Islanders from 20% in 2016 to 41% in 2020.
- By transmission category, MSM had a relatively stable mean percent time spent >200 copies/mL over the five-year period, which was lower than that for PWID and MSM-PWID.
- By housing status, time spent >200 copies/mL among people experiencing homelessness was higher than those non-homeless for each year in 2016-2020. In 2020, time spent >200 copies/mL was 62% for people experiencing homelessness compared to 25% for non-homeless.

Figure 3.9 Trends in mean percent time spent >200 copies/mL during the 12 months after HIV diagnosis by race/ethnicity, transmission category, and housing status, 2016-2020, San Francisco



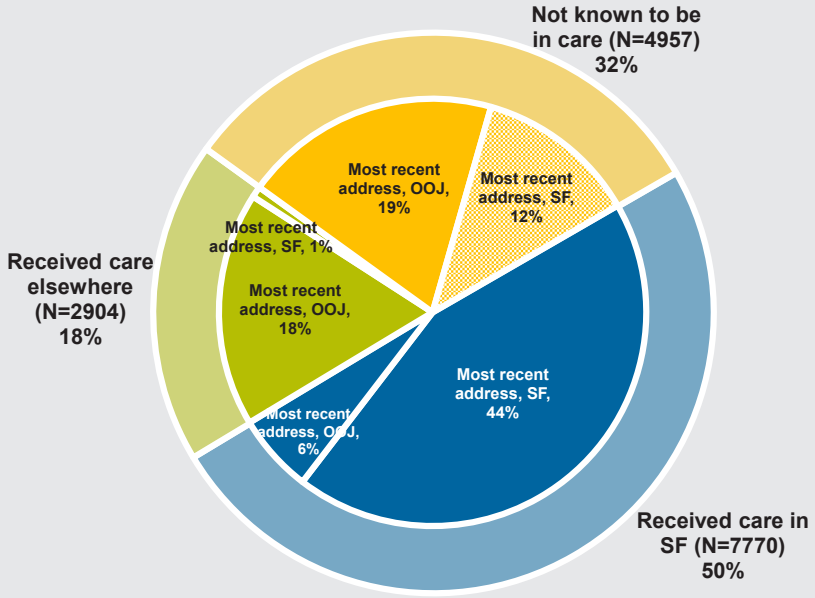
1 Data on heterosexuals are not displayed due to small numbers.
2 Includes people whose addresses at diagnosis were unknown.

Receipt of HIV care among people living with HIV by residence status

- Among 15,631 PLWH in 2021 who resided in San Francisco at time of diagnosis, 68% were known to receive HIV care in 2021 (50% received care in San Francisco, 18% received care outside of San Francisco) and 32% did not receive HIV care.
- Of the 32% not known to be in care, 12% had a current San Francisco address and represent a high priority population for re-engagement into care.

Figure 3.10 People living with HIV in 2021 who resided in San Francisco at diagnosis by care and most recent residence status

N=15,631[1]

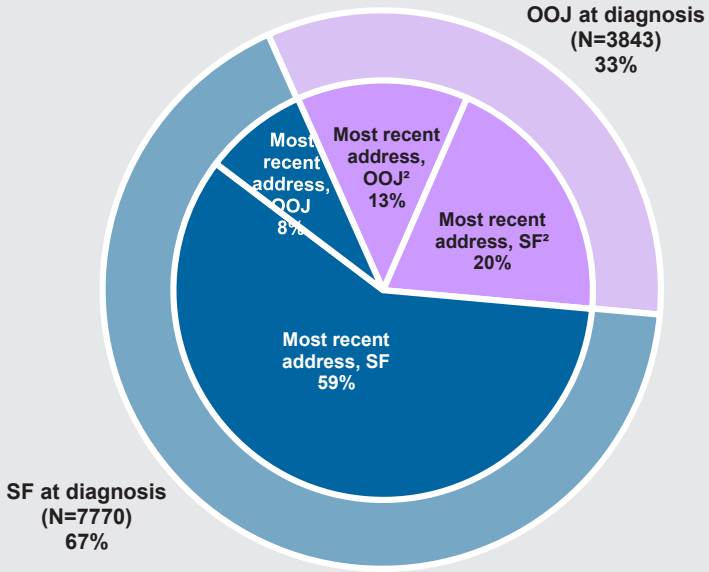


1 Includes people who resided in San Francisco at diagnosis and were alive as of December 2021. See Technical Notes "Residence and Receipt of Care for PLWH."

- Of the 11,613 PLWH who received care in San Francisco in 2021, 33% were originally diagnosed elsewhere and 21% currently reside outside of San Francisco.

Figure 3.11 People living with HIV who received care in San Francisco in 2021 by residence at diagnosis and most recent residence status

N=11,613[1]



1 Includes people who received HIV care in San Francisco in 2021 regardless of where they were initially diagnosed with HIV. Receipt of care in San Francisco is defined as having at least one CD4, viral load, or genotype test ordered by San Francisco HIV providers. See Technical Notes "Residence and Receipt of Care for PLWH."

2 Most recent address for OOJ residents at diagnosis is less complete because the update on their address information is not conducted regularly or consistently.

- The majority of PLWH who received care in 2021 in San Francisco were cis men, White, over 50 years old, and men who have sex with men.
- The distribution of characteristics among those currently known to live in San Francisco and those known to live in another jurisdiction was similar.

Table 3.9 Characteristics of people living with HIV who received care in San Francisco in 2021 by most recent residence status

		People receiving HIV care in San Francisco[1]		
		Total people receiving care in 2021	Most recent residence in San Francisco[2]	Most recent residence outside San Francisco[2]
		Number (%)		
	Total	**11,613 (100)**	**9,147 (100)**	**2,466 (100)**
Gender[3]	Cis Men	10,499 (90)	8,233 (90)	2266 (92)
	Cis Women	725 (6)	569 (6)	156 (6)
	Trans Women	376 (3)	335 (4)	41 (2)
Race/Ethnicity	White	6,017 (52)	4,711 (52)	1,306 (53)
	Black/African American	1,579 (14)	1,211 (13)	368 (15)
	Latinx	2,648 (23)	2,155 (24)	493 (20)
	Asian/Pacific Islander	797 (7)	624 (7)	173 (7)
	Other/Unknown	572 (5)	446 (5)	126 (5)
Age in Years (as of 12/31/2021)	0-12	0 (0)	0 (0)	0 (0)
	13-17	7 (<1)	1 (<1)	6 (<1)
	17-24	87 (1)	53 (1)	34 (1)
	25-29	327 (3)	227 (2)	100 (4)
	30-39	1,549 (13)	1,196 (13)	353 (14)
	40-49	1,975 (17)	1,572 (17)	403 (16)
	50-59	3,549 (31)	2,859 (31)	690 (28)
	60-69	2,956 (25)	2,307 (25)	649 (26)
	70+	1,163 (10)	932 (10)	231 (9)
Transmission Category	MSM	8,431 (73)	6,543 (72)	1,888 (77)
	TWSM	246 (2)	215 (2)	31 (1)
	PWID	605 (5)	517 (6)	88 (4)
	MSM-PWID	1,421 (12)	1,208 (13)	213 (9)
	TWSM-PWID	127 (1)	118 (1)	9 (<1)
	Heterosexual	489 (4)	370 (4)	119 (5)
	Other/Unidentified	294 (3)	176 (2)	118 (5)

1 Includes people living with HIV at end of 2021 who received care in San Francisco in 2021 regardless of where they were initially diagnosed with HIV. Receipt of care in San Francisco is defined as having at least one CD4, viral load, or genotype test ordered by San Francisco HIV providers. See Technical Notes "Residence and Receipt of Care for PLWH."

2 Based on most recent available address.

3 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

4 Survival among People with HIV Disease Stage 3 (AIDS)

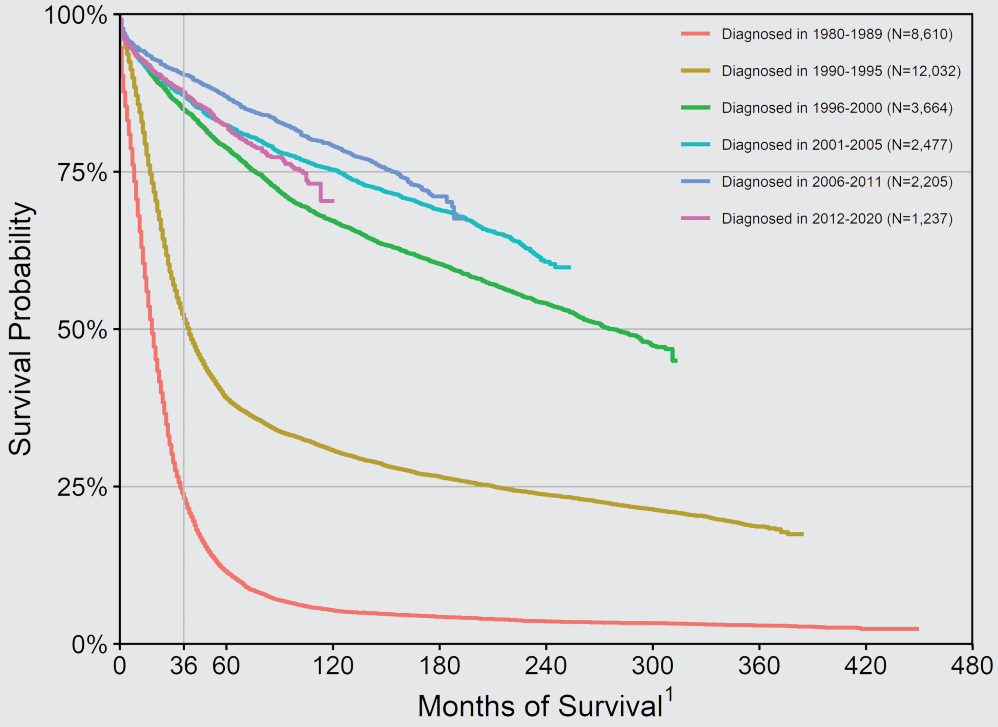
- HIV stage 3 (AIDS) survival time was poor for people diagnosed in the first ten years of the epidemic (1980-1989) with a median survival time of 18 months (1.5 years) after stage 3 diagnosis.
- The median survival time increased to 39 months (3.25 years) for people diagnosed in 1990-1995 and 276 months (23 years) for people diagnosed in 1996-2000.
- The median stage 3 survival time has not been reached for people diagnosed in 2001-2005, 2006-2011, and 2012-2020.
- The probability of surviving at 36 months (three years) increased from 23% among people diagnosed in 1980-1989 to 52% among people diagnosed in 1990-1995, and to 85% among people diagnosed in 1996-2000, with smaller increases in the last three time periods (87%, 90%, 88%, respectively).

23%
OF PEOPLE DIAGNOSED WITH HIV STAGE 3 IN 1980-1989 SURVIVED FOR THREE YEARS

↑

88%
OF PEOPLE DIAGNOSED WITH HIV STAGE 3 IN 2012-2020 SURVIVED FOR THREE YEARS

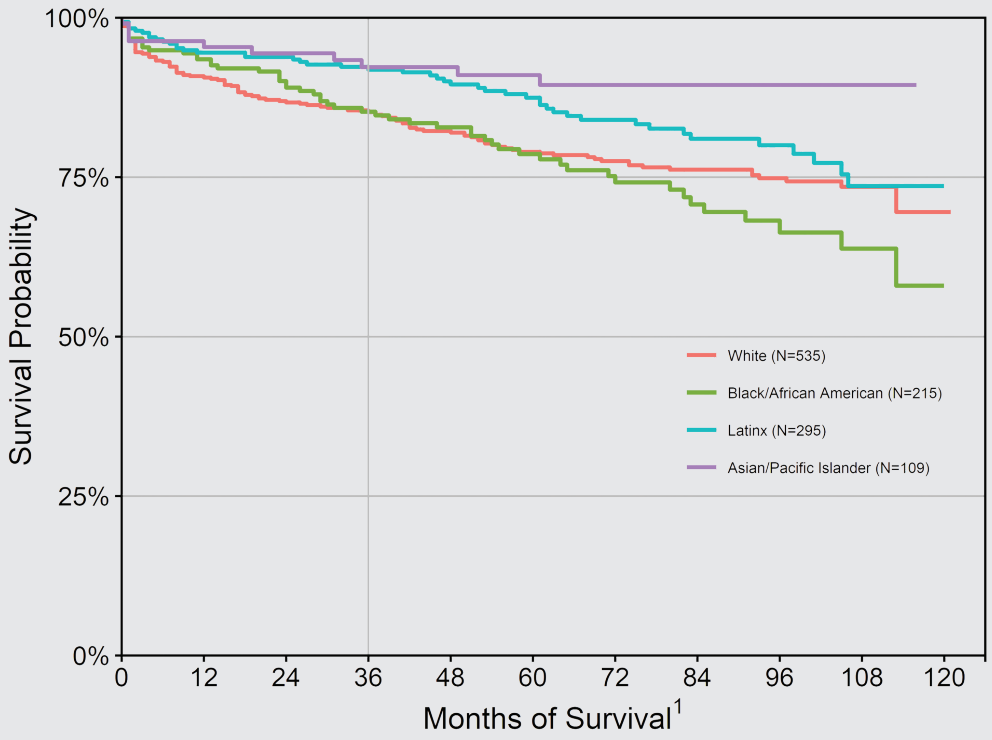
Figure 4.1 Kaplan-Meier survival curves for people diagnosed with HIV disease stage 3 (AIDS) in six time periods, San Francisco



1 See Technical Notes "HIV Disease Stage 3 (AIDS) Survival."

- Among people diagnosed with HIV stage 3 (AIDS) in the years 2012-2020, survival probability at 36 months (three years) was lower among Blacks/African Americans and Whites (85%) compared to the probability among Latinx and Asians/Pacific Islanders (92%).

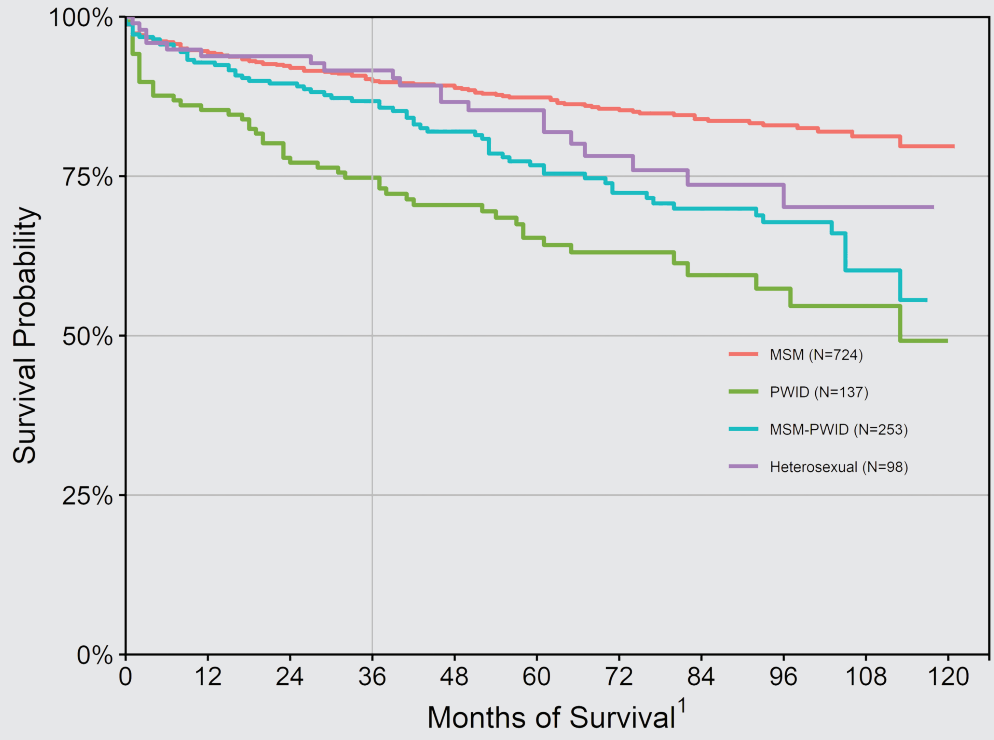
Figure 4.2 Kaplan-Meier survival curves for people diagnosed with HIV disease stage 3 (AIDS) between 2012 and 2020 by race/ethnicity, San Francisco



1 See Technical Notes "HIV Disease Stage 3 (AIDS) Survival."

- Among people diagnosed with HIV stage 3 (AIDS) in the years 2012-2020, the survival probability at 36 months (three years) was similar for MSM, MSM-PWID, and people who acquired HIV through heterosexual contact (90%, 87%, and 92%, respectively).
- The transmission category group with the lowest 36-month survival probability was PWID (75%).

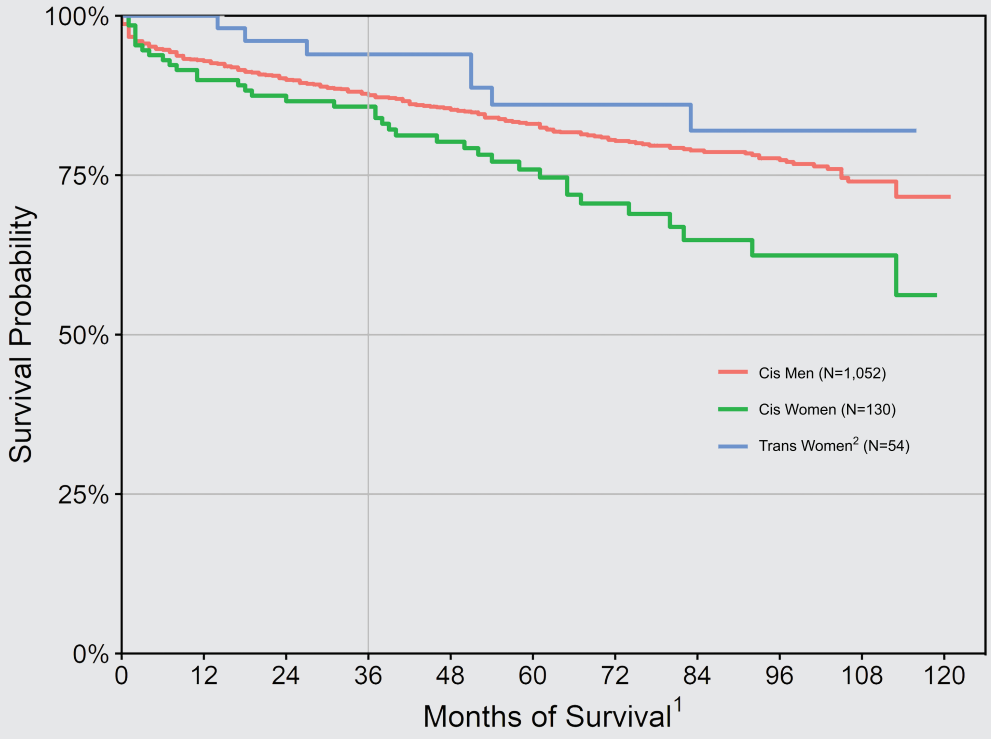
Figure 4.3 Kaplan-Meier survival curves for people diagnosed with HIV disease stage 3 (AIDS) between 2012 and 2020 by transmission category, San Francisco



1 See Technical Notes "HIV Disease Stage 3 (AIDS) Survival."

- In the years 2012-2020, 36-month (three-year) survival probabilities for cis men and cis women diagnosed with HIV stage 3 (AIDS) were similar (88% and 86%, respectively).
- Trans women diagnosed with HIV stage 3 in 2012-2020 had a survival probability of 94% at 36 months.

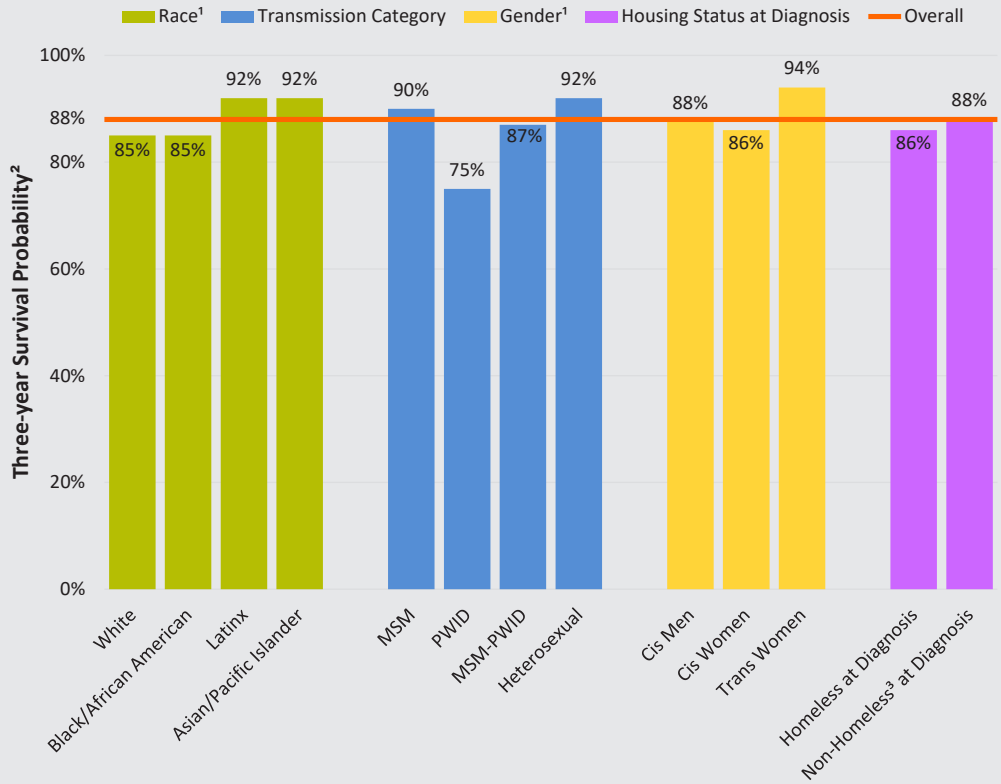
Figure 4.4 Kaplan-Meier survival curves for people diagnosed with HIV disease stage 3 (AIDS) between 2012 and 2020 by gender, San Francisco



1 See Technical Notes "HIV Disease Stage 3 (AIDS) Survival."
2 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

- The overall three-year survival probability (Kaplan-Meier method) after HIV stage 3 for people diagnosed during 2012 to 2020 was 88%.
- Among transmission categories, PWID had the lowest three-year survival probability (75%).

Figure 4.5 Three-year survival probabilities for people diagnosed with HIV disease stage 3 (AIDS) during 2012 to 2020 by race/ethnicity, transmission category, gender, and homeless status at diagnosis, San Francisco



1 Native American, multiracial, trans men data are not released separately due to small numbers.
2 Calculated from Kaplan-Meier method.
3 Includes people whose addresses at diagnosis were unknown.

5 Trends in HIV Mortality

- As of December 31, 2020, the cumulative number of deaths from all causes among people diagnosed with HIV in San Francisco was 22,320.
- From 2016 to 2020, the proportion of deaths among cis men increased while the proportion of deaths among cis women decreased.

73%
OF DEATHS IN 2020 WERE DUE TO NON-HIV-RELATED CAUSES

- From 2019 to 2020 the proportion of deaths among Whites increased from 56% to 62%.
- By risk groups, deaths in MSM-PWID were fairly level from 2016 to 2019 and increased to 28% in 2020.
- In 2020, there were no deaths among people with HIV who were under 30 years of age.
- The proportion of deaths among people age 70 years and older increased since 2016 to 20% of 2020 deaths.
- Deaths due to non-HIV-related causes increased in this time period and accounted for 73% of deaths in 2020.

Table 5.1 Deaths occurring in 2016-2020 among people diagnosed with HIV, by demographic and risk characteristics, San Francisco

		Year of Death					Cumulative Totals as of 12/31/2020
		2016	2017	2018	2019	2020	
		Number (%)					
Gender[1]	Cis Men	196 (84)	223 (88)	229 (89)	239 (91)	256 (90)	21,055
	Cis Women	27 (12)	21 (8)	22 (9)	19 (7)	20 (7)	958
	Trans Women	11 (5)	9 (4)	5 (2)	5 (2)	10 (3)	307
Race/Ethnicity	White	141 (60)	165 (65)	133 (52)	146 (56)	177 (62)	16,072
	Black/African American	50 (21)	43 (17)	57 (22)	43 (16)	45 (16)	2,914
	Latinx	30 (13)	35 (14)	38 (15)	44 (17)	38 (13)	2,394
	Asian/Pacific Islander/ Native American	4 (2)	3 (1)	15 (6)	14 (5)	11 (4)	590
	Multi-Race	9 (4)	7 (3)	13 (5)	16 (6)	15 (5)	350
Transmission Category	MSM	121 (52)	130 (51)	146 (57)	149 (57)	153 (53)	15,932
	PWID	34 (15)	39 (15)	32 (13)	32 (12)	30 (10)	1,902
	MSM-PWID	57 (24)	63 (25)	60 (23)	63 (24)	79 (28)	3,561
	Heterosexual	9 (4)	8 (3)	12 (5)	10 (4)	9 (3)	283
	Other/Unidentified[2]	13 (6)	13 (5)	6 (2)	9 (3)	15 (5)	642
Age at Death (years)	0 - 29	1 (<1)	4 (2)	4 (2)	3 (1)	0 (0)	1,123
	30 - 39	11 (5)	12 (5)	8 (3)	13 (5)	20 (7)	7,401
	40 - 49	39 (17)	38 (15)	29 (11)	28 (11)	31 (11)	7,786
	50 - 59	76 (32)	84 (33)	79 (31)	81 (31)	87 (30)	3,804
	60 - 69	77 (33)	66 (26)	91 (36)	82 (31)	90 (31)	1,612
	70+	30 (13)	49 (19)	45 (18)	56 (21)	58 (20)	594
HIV Disease Stage	Stage 0, 1, 2, or unknown	38 (16)	40 (16)	36 (14)	64 (24)	54 (19)	776
	Stage 3 (AIDS)	196 (84)	213 (84)	220 (86)	199 (76)	232 (81)	21,544
Cause of Death[3]	HIV-related	76 (32)	83 (33)	73 (29)	70 (27)	72 (25)	--
	Non-HIV-related	154 (66)	161 (64)	171 (67)	188 (71)	208 (73)	--
	Unknown	4 (2)	9 (4)	12 (5)	5 (2)	6 (2)	--
Total		**234 (100)**	**253 (100)**	**256 (100)**	**263 (100)**	**286 (100)**	**22,320**

1 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
2 Includes TWSM, TWSM-PWID and people with no identified risk factor.
3 Underlying cause of death obtained from the NDI is available through 2020. See Technical Notes "Death Ascertainment."

- The case-fatality rate due to underlying HIV-related causes among people with HIV disease stage 3 (AIDS) diagnosis declined from 9.48 per 1,000 cases in 2011 to a low of 5.95 per 1,000 cases in 2019. An increase to 6.74 deaths per 1,000 cases was observed in 2020.
- Non-HIV-related causes for death among people with HIV stage 3 diagnosis steadily increased between 2014 and 2018. Non-HIV-related case-fatality in this population increased again in 2020 to 16.90 per 1,000 cases.
- When deaths in all stages of HIV disease were evaluated, case-fatality rates for HIV-related causes declined from 6.41 per 1,000 cases in 2011 to 4.33 per 1,000 cases in 2019 and then slightly increased to 4.49 in 2020.
- Case-fatality rates for non-HIV causes among decedents of all HIV stages have gradually increased since 2014 to a high of 12.98 deaths per 1,000 cases in 2020.
- All-cause case-fatality rates remained relatively stable between 2011 and 2019 among all people living with HIV and among people with HIV stage 3. In 2020, increases in all-cause case-fatality were observed in both populations, likely due to new COVID-19-related deaths (N=12).

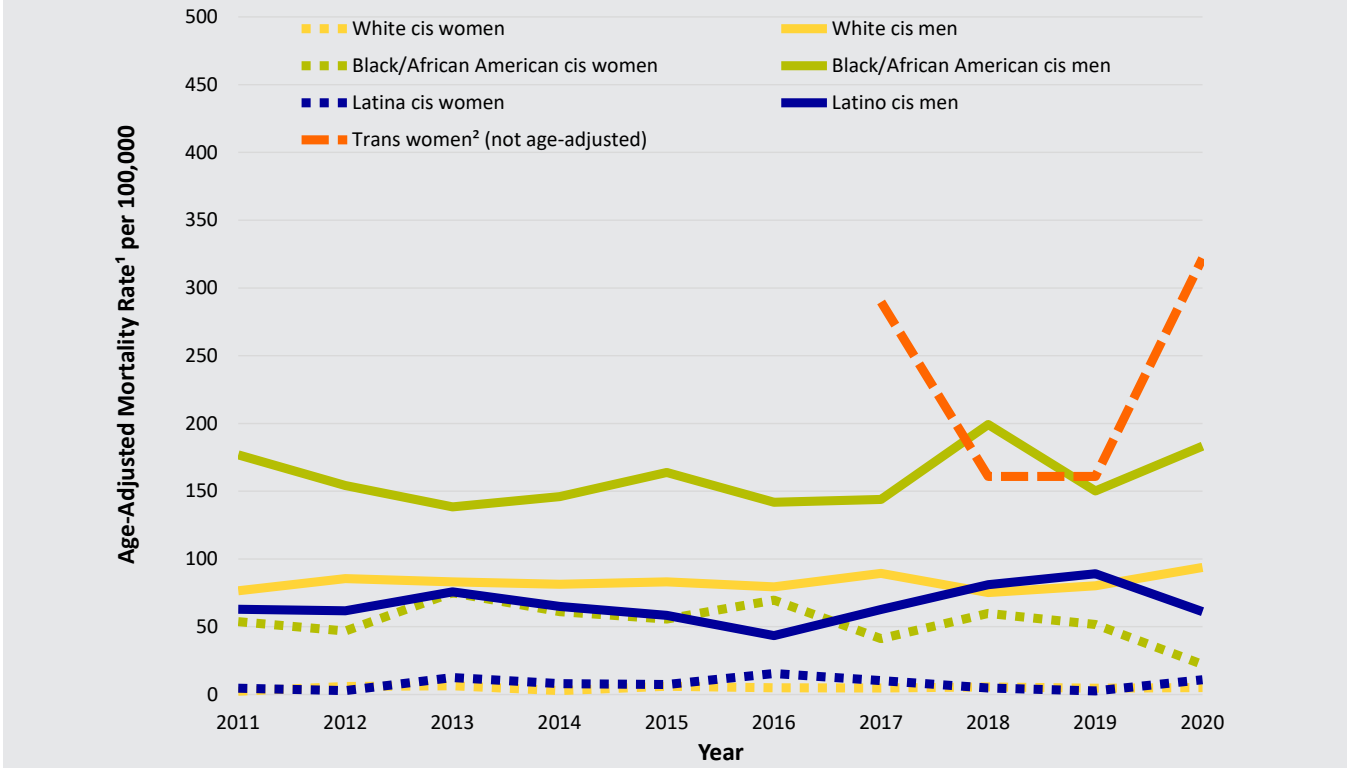
Table 5.2 Case-fatality rates per 1,000 due to HIV-related and non-HIV-related causes among people diagnosed with HIV, 2011-2020, San Francisco

		People with HIV (all stages)			People with HIV Stage 3 (AIDS)		
		HIV-related cause of death	Non-HIV-related cause of death	All-cause mortality	HIV-related cause of death	Non-HIV-related cause of death	All-cause mortality
		Case-fatality rate[1] per 1,000 PLWH			Case-fatality rate[1] per 1,000 people with HIV Stage 3		
Year	2011	6.41	7.87	14.28	9.48	9.78	19.27
	2012	5.19	9.32	14.51	7.63	11.40	19.03
	2013	6.19	9.28	15.47	8.60	10.78	19.38
	2014	6.41	8.14	14.54	9.22	10.21	19.43
	2015	6.26	9.15	15.41	9.37	11.66	21.02
	2016	4.67	9.47	14.14	7.14	12.16	19.30
	2017	5.10	9.89	14.99	7.47	13.23	20.71
	2018	4.50	10.59	15.09	7.02	14.66	21.68
	2019	4.33	11.64	15.97	5.95	14.07	20.02
	2020	4.49	12.98	17.47	6.74	16.90	23.64

1 Case-fatality rates are calculated as the number of people diagnosed with HIV (all disease stages), or HIV stage 3 (AIDS), who died each year divided by the number of total people living with HIV, or HIV stage 3 (AIDS), during that year. See Technical Notes for "Death Ascertainment."

- The age-adjusted HIV mortality rates among Black/African American cis men remained higher than White and Latino cis men during 2011-2020, totaling 183 per 100,000 in 2020. This was nearly two times higher than among White cis men (94 per 100,000) and three times higher than among Latino cis men (61 per 100,000).
- During 2011-2020, HIV mortality rates for cis women were generally lower than the rates among cis men. However, mortality rates among Black/African American cis women were often comparable to those among White and Latino cis men.
- In 2020, Black/African American cis women had a mortality rate of 22 deaths per 100,000 which was four times higher than among White cis women and two times higher than among Latina cis women. This was the smallest disparity between Black/African American cis women and other cis women observed in the past decade.
- Mortality rates for trans women were not age-adjusted and were calculated using an estimate of the population size of trans women from 2017. Crude rates are presented instead, showing a high of 290 deaths per 100,000 in 2017, a decline to 161 per 100,000 during 2018-2019, and a rise to 322 per 100,000 in 2020. These rates were typically higher than the age-adjusted rates observed among other demographic categories.

Figure 5.1 Age-adjusted mortality rates among people aged 18 and older with HIV per 100,000 by gender and race/ethnicity, 2011-2020, San Francisco



1 Age-adjusted mortality rates are calculated for people 18 years and older. For each race/ethnicity and gender, the number of people with HIV who died each year was divided by projected San Francisco population estimates across fourteen age groups (18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+) to generate crude rates applied to the standard population, defined using the California population estimates from the Department of Finance. See Technical Notes for "HIV Case Rates and HIV Mortality Rates."

2 Mortality rates for trans women are not age-adjusted. Due to small numbers, trans women are not stratified by race/ethnicity and mortality rates for trans men are not calculated. San Francisco trans women population estimate from Raymond HF, Wilson EC, McFarland W. Transwoman Population Size. Am J Public Health. 2017 Sep;107(9):e12. doi: 10.2105/AJPH.2017.303964. PMID: 28787216; PMCID: PMC5551612.

- Underlying causes of death were assessed among decedents with HIV from 2009 to 2020. COVID-19 deaths were evaluated separately for 2020.
- HIV as the underlying cause of death continued to decline, 43.7% of deaths in 2009-2012, 39.5% in 2013-2016, 29.0% in 2017-2020.
- In 2017-2020, accidental deaths surpassed non-AIDS cancers as the second most frequent underlying cause of death in people with HIV.
- The percentage of deaths due to drug overdoses increased from 11.1% in 2009-2012 to 15.0% in 2017-2020.
- Lung cancer was the most frequently occurring non-AIDS cancer, although it declined from 3.5% in the first time period to 2.7% in the most recent time period.
- Heart disease increased in the most recent time period, from 8.8% in 2009-2012 to 14.6% in 2017-2020.
- Liver cirrhosis, as an underlying cause of death, sharply declined in the most recent time period; cirrhosis accounted for 1.3% of deaths in the first two time periods and declined to 0.2% in 2017-2020. The decline of liver cirrhosis as an underlying cause of death may be associated with availability of the new generation of direct-acting antivirals starting in 2014 for treatment of hepatitis C virus.
- The National Death Index began coding deaths due to COVID-19 in 2020; in that year, COVID-19 was the underlying cause of death for 2.5% of decedents with HIV.

Table 5.3 Underlying causes of death among people diagnosed with HIV, 2009-2020, San Francisco

		Year of Death		
		2009-2012 (N=940)	2013-2016 (N=967)	2017-2020 (N=1,027)
		Number (%)		
Underlying Cause of Death[1]	HIV	411 (43.7)	382 (39.5)	298 (29.0)
	Accidents	119 (12.7)	116 (12.0)	173 (16.8)
	Drug overdose	104 (11.1)	96 (9.9)	154 (15.0)
	Non-AIDS cancer	127 (13.5)	141 (14.6)	170 (16.6)
	Lung cancer	33 (3.5)	31 (3.2)	28 (2.7)
	Liver cancer	19 (2.0)	20 (2.1)	17 (1.7)
	Anal cancer	5 (0.5)	14 (1.4)	12 (1.2)
	Pancreatic cancer	5 (0.5)	7 (0.7)	12 (1.2)
	Rectal cancer	3 (0.3)	2 (0.2)	10 (1.0)
	Colon cancer	7 (0.7)	5 (0.5)	6 (0.6)
	Leukemia	5 (0.5)	2 (0.2)	3 (0.3)
	Hodgkins lymphoma	1 (0.1)	1 (0.1)	1 (0.1)
	Heart disease	83 (8.8)	89 (9.2)	150 (14.6)
	Coronary heart disease	40 (4.3)	43 (4.4)	92 (9.0)
	Cardiomyopathy	4 (0.4)	6 (0.6)	6 (0.6)
	Chronic obstructive pulmonary disease	18 (1.9)	21 (2.2)	30 (2.9)
	Suicide	37 (3.9)	33 (3.4)	29 (2.8)
	Cerebrovascular disease	11 (1.2)	10 (1.0)	22 (2.1)
	Liver disease	22 (2.3)	27 (2.8)	16 (1.6)
	Alcoholic liver disease	9 (1.0)	11 (1.1)	14 (1.4)
	Liver cirrhosis	12 (1.3)	13 (1.3)	2 (0.2)
	Mental disorders due to substance use	12 (1.3)	10 (1.0)	10 (1.0)
	Pneumonitis	3 (0.3)	5 (0.5)	8 (0.8)
	Septicemia	3 (0.3)	4 (0.4)	8 (0.8)
	COVID-19[2]	0 (0.0)	0 (0.0)	7 (2.5)
	Diabetes	8 (0.9)	10 (1.0)	7 (0.7)
	Viral hepatitis	6 (0.6)	8 (0.8)	5 (0.5)
	Renal disease	4 (0.4)	6 (0.6)	5 (0.5)
	Assault	10 (1.1)	13 (1.3)	4 (0.4)
	Diseases of arteries	3 (0.3)	4 (0.4)	3 (0.3)

1 See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table.

2 The National Death Index began coding deaths due to COVID-19 in 2020. The number and percent of COVID-19 as the underlying cause of death are among 280 decedents with HIV in the single year of 2020 only.

- HIV was the most frequent, yet declining, underlying cause of death for cis men, cis women, and trans women from 2009 to 2020.
- In each of the three time periods, HIV was the underlying cause of death for greater proportions of trans women than for cis men.
- The proportion of deaths due to non-AIDS cancers among cis men and cis women increased from the first to the last time period.
- Suicides among decedents with HIV occurred predominantly in cis men.
- Deaths where accidents (including drug overdose) were the underlying cause increased from the first time period to the last time period for cis men, cis women, and trans women.
- For cis women in 2017-2020, accidents (including drug overdose) accounted for the same proportion of deaths as HIV (34.2%).
- For trans women in 2017-2020, accidents (including drug overdose) accounted for 37% of deaths and exceeded deaths due to HIV among trans women (33.3%).

Table 5.4 Underlying causes of death among people diagnosed with HIV by gender, 2009-2020, San Francisco

		Year of Death								
		2009-2012			2013-2016			2017-2020		
		Cis Men	Cis Women	Trans Women	Cis Men	Cis Women	Trans Women	Cis Men	Cis Women	Trans Women
		Number (%)								
	Total	830	79	31	831	102	34	920	79	27
Underlying Cause of Death[1]	HIV	360 (43.4)	36 (45.6)	15 (48.4)	327 (39.4)	39 (38.2)	16 (47.1)	262 (28.5)	27 (34.2)	9 (33.3)
	Non-AIDS cancer	123 (14.8)	2 (2.5)	- -	122 (14.7)	17 (16.7)	- -	162 (17.6)	6 (7.6)	- -
	Heart disease	77 (9.3)	5 (6.3)	- -	80 (9.6)	6 (5.9)	- -	145 (15.8)	3 (3.8)	- -
	Accidents (including drug overdose)	97 (11.7)	16 (20.3)	6 (19.4)	95 (11.4)	14 (13.7)	7 (20.6)	135 (14.7)	27 (34.2)	10 (37.0)
	Suicide	36 (4.3)	0 (0.0)	- -	33 (4.0)	0 (0.0)	0 (0.0)	29 (3.2)	0 (0.0)	0 (0.0)
	Chronic obstructive pulmonary disease	11 (1.3)	6 (7.6)	- -	18 (2.2)	3 (2.9)	0 (0.0)	25 (2.7)	5 (6.3)	0 (0.0)
	Cerebrovascular disease	9 (1.1)	2 (2.5)	0 (0.0)	9 (1.1)	1 (1.0)	0 (0.0)	22 (2.4)	0 (0.0)	0 (0.0)
	Liver disease	20 (2.4)	1 (1.3)	- -	24 (2.9)	3 (2.9)	0 (0.0)	14 (1.5)	0 (0.0)	- -
	Mental disorders due to substance use	9 (1.1)	2 (2.5)	1 (3.2)	9 (1.1)	1 (1.0)	0 (0.0)	10 (1.1)	0 (0.0)	0 (0.0)
	Diabetes	7 (0.8)	1 (1.3)	0 (0.0)	9 (1.1)	1 (1.0)	0 (0.0)	7 (0.8)	0 (0.0)	0 (0.0)
	Septicemia	2 (0.2)	1 (1.3)	0 (0.0)	2 (0.2)	2 (2.0)	0 (0.0)	7 (0.8)	1 (1.3)	0 (0.0)

1 See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table.
-- Data are not displayed due to small number of deaths among trans women and population size.

- Latinx decedents had the highest proportions of deaths attributed to HIV as the underlying cause (48.8% or more) in the first two time periods, compared to Black/African Americans and Whites.
- By the third time period (2017-2020), deaths due to HIV among these three racial/ethnic groups had all decreased to these proportions: 29.2% of Latinx deaths, 27.2% of Black/African American deaths, and 28.2% of White deaths.
- Trends in non-AIDS cancers were similar among Latinx and Whites, with similar proportions by racial/ethnic group in the first two time periods and increasing to 16.0% in Latinx and 17.7% in Whites during the last time period 2017-2020.
- Deaths due to accidents (including drug overdoses) increased in 2017-2020 and exceeded 15.0% for all racial/ethnic groups; accidents were the second leading underlying cause of death for Black/African American and Latinx decedents in 2017-2020.
- Deaths due to heart disease spiked in the last time period among all three racial/ethic groups; 11.1% in Latinx, 16.% in Black/Africa American, and 15.4% in White decedents in 2017-2020.
- The proportion of deaths due to septicemia was low or zero in the first two time periods for the three racial/ethnic groups; in 2017-2020 septicemia as the underlying cause increased to 1.3% in Whites.

Table 5.5 Underlying causes of death among people diagnosed with HIV by race/ethnicity, 2009-2020, San Francisco

		Year of Death								
		2009-2012			2013-2016			2017-2020		
		Latinx	Black/African American	White	Latinx	Black/African American	White	Latinx	Black/African American	White
		Number (%)								
	Total	112	193	564	129	197	560	144	184	609
Underlying Cause of Death[1]	HIV	62 (55.4)	85 (44.0)	230 (40.8)	63 (48.8)	78 (39.6)	209 (37.3)	42 (29.2)	50 (27.2)	172 (28.2)
	Non-AIDS cancer	12 (10.7)	24 (12.4)	85 (15.1)	12 (9.3)	38 (19.3)	83 (14.8)	23 (16.0)	27 (14.7)	108 (17.7)
	Heart disease	6 (5.4)	15 (7.8)	55 (9.8)	10 (7.8)	12 (6.1)	60 (10.7)	16 (11.1)	31 (16.8)	94 (15.4)
	Accidents (including drug overdose)	10 (8.9)	26 (13.5)	72 (12.8)	12 (9.3)	22 (11.2)	71 (12.7)	24 (16.7)	36 (19.6)	93 (15.3)
	Suicide	4 (3.6)	2 (1.0)	30 (5.3)	5 (3.9)	1 (0.5)	23 (4.1)	3 (2.1)	2 (1.1)	20 (3.3)
	Chronic obstructive pulmonary disease	3 (2.7)	7 (3.6)	8 (1.4)	0 (0.0)	4 (2.0)	17 (3.0)	3 (2.1)	8 (4.3)	18 (3.0)
	Cerebrovascular disease	3 (2.7)	3 (1.6)	4 (0.7)	0 (0.0)	2 (1.0)	8 (1.4)	4 (2.8)	4 (2.2)	13 (2.1)
	Liver disease	3 (2.7)	3 (1.6)	14 (2.5)	5 (3.9)	5 (2.5)	14 (2.5)	4 (2.8)	2 (1.1)	9 (1.5)
	Septicemia	0 (0.0)	1 (0.5)	2 (0.4)	1 (0.8)	3 (1.5)	0 (0.0)	0 (0.0)	0 (0.0)	8 (1.3)
	Mental disorders due to substance use	1 (0.9)	2 (1.0)	7 (1.2)	2 (1.6)	2 (1.0)	5 (0.9)	1 (0.7)	2 (1.1)	7 (1.2)

1 See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table. Asian, Pacific Islander, Native American, and multiracial decedents were not displayed due to small numbers.

- The proportion of deaths where HIV was the underlying cause of death declined across three time periods to 29.7% for MSM, 31.3% for PWID, and 24.7% for MSM-PWID in the 2017-2020 time period.
- The proportion of deaths due to heart disease increased for MSM and MSM-PWID from 2009-2012 to 2017-2020.
- From 2013-2016 to 2017-2020, deaths due to drug overdoses dramatically increased for PWID accounting for 30.5% in the recent time period.

Table 5.6 Underlying causes of death among people diagnosed with HIV by transmission category, 2009-2020, San Francisco

		Year of Death								
		2009-2012			2013-2016			2017-2020		
		MSM	PWID	MSM-PWID	MSM	PWID	MSM-PWID	MSM	PWID	MSM-PWID
		Number (%)								
	Total	505	138	215	527	162	209	555	131	263
Underlying Cause of Death[1]	HIV	218 (43.2)	54 (39.1)	93 (43.3)	204 (38.7)	61 (37.7)	79 (37.8)	165 (29.7)	41 (31.3)	65 (24.7)
	Non-AIDS cancer	88 (17.4)	10 (7.2)	23 (10.7)	88 (16.7)	25 (15.4)	21 (10.0)	111 (20.0)	12 (9.2)	39 (14.8)
	Heart disease	52 (10.3)	10 (7.2)	18 (8.4)	55 (10.4)	14 (8.6)	16 (7.7)	89 (16.0)	11 (8.4)	38 (14.4)
	Accidents	45 (8.9)	25 (18.1)	40 (18.6)	41 (7.8)	21 (13.0)	46 (22.0)	48 (8.6)	44 (33.6)	64 (24.3)
	Drug overdose	37 (7.3)	23 (16.7)	38 (17.7)	29 (5.5)	19 (11.7)	43 (20.6)	41 (7.4)	40 (30.5)	57 (21.7)
	Suicide	26 (5.1)	2 (1.4)	8 (3.7)	23 (4.4)	0 (0.0)	10 (4.8)	20 (3.6)	0 (0.0)	9 (3.4)
	Chronic obstructive pulmonary disease	10 (2.0)	6 (4.3)	0 (0.0)	14 (2.7)	4 (2.5)	2 (1.0)	15 (2.7)	6 (4.6)	6 (2.3)
	Cerebrovascular disease	6 (1.2)	3 (2.2)	0 (0.0)	8 (1.5)	1 (0.6)	0 (0.0)	12 (2.2)	0 (0.0)	8 (3.0)
	Liver disease	12 (2.4)	4 (2.9)	5 (2.3)	18 (3.4)	4 (2.5)	5 (2.4)	10 (1.8)	1 (0.8)	3 (1.1)
	Mental disorders due to substance use	3 (0.6)	3 (2.2)	4 (1.9)	8 (1.5)	1 (0.6)	1 (0.5)	8 (1.4)	1 (0.8)	1 (0.4)
	Diabetes	5 (1.0)	1 (0.7)	2 (0.9)	5 (0.9)	2 (1.2)	1 (0.5)	5 (0.9)	0 (0.0)	1 (0.4)
	Septicemia	1 (0.2)	1 (0.7)	0 (0.0)	0 (0.0)	3 (1.9)	0 (0.0)	5 (0.9)	2 (1.5)	1 (0.4)

1 See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table.

- When multiple causes of death are considered, which include both underlying and contributory causes, the proportion of deaths due to HIV declined from 65.6% in the period 2009-2012 to 50.3% in 2017-2020.
- Heart disease was the second most common cause of death contributing to deaths in more than a third of decedents in 2017-2020.
- Deaths due to accidents increased to 18.8% in 2017-2020 with those due to drug overdoses increasing to 16.0%.
- In 2020, the National Death Index began coding deaths due to COVID-19; for that single year, COVID-19 was a contributory cause of death for 4.2% of decedents with HIV.

Table 5.7 Multiple causes of death among people diagnosed with HIV, 2009-2020, San Francisco

		Year of Death		
		2009-2012 N=940	2013-2016 N=967	2017-2020 N=1,027
		Number (%)		
Multiple Causes of Death[1]	HIV	617 (65.6)	597 (61.7)	517 (50.3)
	Heart disease	264 (28.1)	291 (30.1)	355 (34.6)
	Coronary heart disease	77 (8.2)	88 (9.1)	141 (13.7)
	Cardiomyopathy	25 (2.7)	28 (2.9)	32 (3.1)
	Non-AIDS cancer	170 (18.1)	187 (19.3)	224 (21.8)
	Lung cancer	40 (4.3)	36 (3.7)	35 (3.4)
	Liver cancer	28 (3.0)	22 (2.3)	21 (2.0)
	Anal cancer	9 (1.0)	17 (1.8)	17 (1.7)
	Colon cancer	7 (0.7)	6 (0.6)	12 (1.2)
	Pancreatic cancer	5 (0.5)	10 (1.0)	12 (1.2)
	Rectal cancer	4 (0.4)	5 (0.5)	11 (1.1)
	Leukemia	9 (1.0)	6 (0.6)	6 (0.6)
	Hodgkin lymphoma	6 (0.6)	1 (0.1)	4 (0.4)
	Accidents	128 (13.6)	123 (12.7)	193 (18.8)
	Drug overdose	110 (11.7)	98 (10.1)	164 (16.0)
	Mental disorders due to substance use	95 (10.1)	84 (8.7)	133 (13.0)
	Renal disease	97 (10.3)	102 (10.5)	133 (13.0)
	Septicemia	85 (9.0)	99 (10.2)	97 (9.4)
	Chronic obstructive lung disease	64 (6.8)	69 (7.1)	85 (8.3)
	Liver disease	127 (13.5)	118 (12.2)	82 (8.0)
	Liver cirrhosis	66 (7.0)	73 (7.5)	51 (5.0)
	Alcoholic liver disease	9 (1.0)	13 (1.3)	18 (1.8)
	Viral hepatitis	118 (12.6)	127 (13.1)	73 (7.1)
	Diabetes	51 (5.4)	45 (4.7)	57 (5.6)
	Cerebrovascular disease	30 (3.2)	45 (4.7)	53 (5.2)
	Suicide	37 (3.9)	33 (3.4)	29 (2.8)
	Pneumonitis	9 (1.0)	20 (2.1)	23 (2.2)
	Diseases of arteries	8 (0.9)	16 (1.7)	16 (1.6)
	Hyperlipidemia	8 (0.9)	12 (1.2)	13 (1.3)
	COVID-19[2]	0 (0.0)	0 (0.0)	12 (4.2)
	Assault	10 (1.1)	13 (1.3)	4 (0.4)

1 Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table.

2 The National Death Index began coding deaths due to COVID-19 in 2020. The number and percent of COVID-19 as a cause of death are among 280 decedents with HIV in the single year of 2020 only.

- Among cis men, cis women and trans women, HIV was the most frequent underlying or contributory cause of death in all time periods.
- The differences in HIV as a cause of death by genders were most pronounced in the 2013-2016 time period, with cis women and trans women having higher proportions of death due to HIV (66.7% and 64.7%) compared to cis men (61.0%).
- Heart disease was the second most frequent underlying or contributory cause of death in cis men across three time periods; for cis women and trans women, accidents were the second most frequent cause of death in 2017-2020 decedents.
- Trans women had higher proportions of accident-related deaths compared to cis men and cis women in each of the three time periods.
- In 2017-2020, drug overdoses increased for cis men (14.0%), cis women (30.4%), and trans women (37.0%).
- In the most recent time period, HIV, drug overdose, renal disease, mental disorders due to substance use, septicemia, and chronic obstructive pulmonary disease accounted for a higher proportion of deaths in cis women than in cis men.
- Viral hepatitis-related deaths declined in the most recent time period for cis men (7.1%) and cis women (6.3%). This decline may be associated with the availability of the new generation of direct-acting antivirals starting in 2014 for treatment of hepatitis C virus.

Table 5.8 Multiple causes of death among people diagnosed with HIV by gender, 2009-2020, San Francisco

		Year of Death								
		2009-2012			2013-2016			2017-2020		
		Cis Men	Cis Women	Trans Women	Cis Men	Cis Women	Trans Women	Cis Men	Cis Women	Trans Women
		Number (%)								
	Total	830	79	31	831	102	34	920	79	27
Multiple Causes of Death[1]	HIV	544 (65.5)	51 (64.6)	22 (71.0)	507 (61.0)	68 (66.7)	22 (64.7)	459 (49.9)	44 (55.7)	14 (51.9)
	Heart disease	228 (27.5)	29 (36.7)	7 (22.6)	247 (29.7)	31 (30.4)	13 (38.2)	329 (35.8)	18 (22.8)	8 (29.6)
	Non-AIDS cancer	164 (19.8)	3 (3.8)	- -	162 (19.5)	21 (20.6)	- -	208 (22.6)	12 (15.2)	- -
	Accidents	104 (12.5)	17 (21.5)	7 (22.6)	101 (12.2)	15 (14.7)	7 (20.6)	155 (16.8)	27 (34.2)	10 (37.0)
	Drug overdose	91 (11.0)	14 (17.7)	5 (16.1)	79 (9.5)	15 (14.7)	- -	129 (14.0)	24 (30.4)	10 (37.0)
	Renal disease	84 (10.1)	11 (13.9)	- -	80 (9.6)	18 (17.6)	- -	116 (12.6)	12 (15.2)	5 (18.5)
	Mental disorders due to substance	80 (9.6)	12 (15.2)	- -	74 (8.9)	9 (8.8)	- -	114 (12.4)	15 (19.0)	- -
	Septicemia	70 (8.4)	10 (12.7)	5 (16.1)	84 (10.1)	12 (11.8)	- -	84 (9.1)	11 (13.9)	- -
	Liver disease	112 (13.5)	10 (12.7)	5 (16.1)	102 (12.3)	12 (11.8)	- -	76 (8.3)	3 (3.8)	- -
	Chronic obstructive pulmonary disease	49 (5.9)	14 (17.7)	- -	54 (6.5)	13 (12.7)	- -	73 (7.9)	11 (13.9)	- -
	Viral hepatitis	102 (12.3)	11 (13.9)	5 (16.1)	102 (12.3)	20 (19.6)	5 (14.7)	65 (7.1)	5 (6.3)	- -

1 Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table.

-- Data are not displayed due to small number of deaths among trans women and population size.

- When multiple causes of death were compared for Latinx, Black/African American, and White decedents, the proportion of deaths HIV contributed to decrease across three time periods for all racial ethnic groups.
- In the last time period, HIV contributed to 48.6% of Latinx deaths, 50% of Black/African American deaths, and 50.7% of White deaths.
- Deaths due to drug overdose increased for all three racial/ethnic groups between the first and third time periods; in 2017-2020 drug overdoses contributed to 16% of Latinx deaths, 19.6% of Black/African American deaths, and 14% of White deaths.
- Deaths due to liver disease and viral hepatitis declined substantially for these three racial/ethnic groups in the last time period.

Table 5.9 Multiple causes of death among people diagnosed with HIV by race/ethnicity, 2009-2020, San Francisco

		Year of Death								
		2009-2012			2013-2016			2017-2020		
		Latinx	Black/African American	White	Latinx	Black/African American	White	Latinx	Black/African American	White
		Number (%)								
	Total	112	193	564	129	197	560	144	184	609
Multiple Causes of Death[1]	HIV	86 (76.8)	134 (69.4)	354 (62.8)	89 (69.0)	129 (65.5)	332 (59.3)	70 (48.6)	92 (50.0)	309 (50.7)
	Heart disease	21 (18.8)	72 (37.3)	151 (26.8)	37 (28.7)	60 (30.5)	172 (30.7)	40 (27.8)	73 (39.7)	211 (34.6)
	Non-AIDS cancer	16 (14.3)	32 (16.6)	111 (19.7)	16 (12.4)	47 (23.9)	111 (19.8)	29 (20.1)	39 (21.2)	140 (23.0)
	Accidents	10 (8.9)	29 (15.0)	77 (13.7)	14 (10.9)	23 (11.7)	75 (13.4)	29 (20.1)	37 (20.1)	104 (17.1)
	Drug overdose	10 (8.9)	26 (13.5)	63 (11.2)	8 (6.2)	20 (10.2)	60 (10.7)	23 (16.0)	36 (19.6)	85 (14.0)
	Mental disorders due to substance use	6 (5.4)	29 (15.0)	56 (9.9)	14 (10.9)	8 (4.1)	52 (9.3)	16 (11.1)	23 (12.5)	79 (13.0)
	Renal disease	12 (10.7)	35 (18.1)	44 (7.8)	10 (7.8)	34 (17.3)	49 (8.8)	17 (11.8)	42 (22.8)	62 (10.2)
	Septicemia	18 (16.1)	16 (8.3)	41 (7.3)	20 (15.5)	22 (11.2)	49 (8.8)	16 (11.1)	13 (7.1)	57 (9.4)
	Liver disease	23 (20.5)	23 (11.9)	73 (12.9)	21 (16.3)	22 (11.2)	66 (11.8)	14 (9.7)	9 (4.9)	50 (8.2)
	Chronic obstructive pulmonary disease	4 (3.6)	24 (12.4)	35 (6.2)	3 (2.3)	17 (8.6)	45 (8.0)	8 (5.6)	20 (10.9)	46 (7.6)
	Viral hepatitis	13 (11.6)	34 (17.6)	62 (11.0)	20 (15.5)	32 (16.2)	60 (10.7)	12 (8.3)	15 (8.2)	37 (6.1)

1 Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table.

- When multiple causes of death were considered by transmission categories (MSM, PWID, and MSM-PWID), heart disease was observed as the second most frequent underlying or contributory cause of death, following HIV.
- Deaths due to renal disease, mental disorders due to substance use, and septicemia increased among MSM, across these three time periods.
- Drug overdose-related deaths increased dramatically among PWID from 18.1% in 2009-2012 to 31.3% in 2017-2020.
- Compared to MSM, PWID and MSM-PWID had higher proportions of deaths where liver disease and accidents (including drug overdoses) were a cause.

Table 5.10 Multiple causes of death among people diagnosed with HIV by transmission category, 2009-2020, San Francisco

		Year of Death								
		2009-2012			2013-2016			2017-2020		
		MSM	PWID	MSM-PWID	MSM	PWID	MSM-PWID	MSM	PWID	MSM-PWID
		Number (%)								
	Total	505	138	215	527	162	209	555	131	263
Multiple Causes of Death[1]	HIV	335 (66.3)	85 (61.6)	138 (64.2)	322 (61.1)	109 (67.3)	116 (55.5)	294 (53.0)	66 (50.4)	110 (41.8)
	Heart disease	142 (28.1)	36 (26.1)	59 (27.4)	163 (30.9)	45 (27.8)	54 (25.8)	194 (35.0)	37 (28.2)	95 (36.1)
	Non-AIDS cancer	116 (23.0)	16 (11.6)	28 (13.0)	110 (20.9)	30 (18.5)	34 (16.3)	146 (26.3)	23 (17.6)	45 (17.1)
	Renal disease	44 (8.7)	25 (18.1)	20 (9.3)	50 (9.5)	24 (14.8)	16 (7.7)	72 (13.0)	22 (16.8)	25 (9.5)
	Mental disorders due to substance use	37 (7.3)	23 (16.7)	29 (13.5)	44 (8.3)	13 (8.0)	25 (12.0)	63 (11.4)	24 (18.3)	36 (13.7)
	Accidents	47 (9.3)	29 (21.0)	42 (19.5)	43 (8.2)	22 (13.6)	49 (23.4)	62 (11.2)	45 (34.4)	69 (26.2)
	Drug overdose	39 (7.7)	25 (18.1)	39 (18.1)	29 (5.5)	20 (12.3)	44 (21.1)	45 (8.1)	41 (31.3)	62 (23.6)
	Septicemia	37 (7.3)	13 (9.4)	22 (10.2)	47 (8.9)	25 (15.4)	18 (8.6)	54 (9.7)	12 (9.2)	24 (9.1)
	Liver disease	48 (9.5)	25 (18.1)	46 (21.4)	52 (9.9)	25 (15.4)	35 (16.7)	37 (6.7)	11 (8.4)	29 (11.0)
	Diabetes	35 (6.9)	6 (4.3)	7 (3.3)	27 (5.1)	6 (3.7)	6 (2.9)	36 (6.5)	10 (7.6)	8 (3.0)
	Chronic obstructive pulmonary disease	25 (5.0)	20 (14.5)	14 (6.5)	35 (6.6)	19 (11.7)	10 (4.8)	33 (5.9)	22 (16.8)	24 (9.1)

1 Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table.

- Among 2,934 deaths during 2009 through 2020, 22% were among people who were ever homeless from time of HIV diagnosis to death.
- When examining multiple causes of death among decedents who were ever homeless, a higher proportion of deaths were due to AIDS opportunistic illnesses, accidents (including drug overdoses), renal disease, liver disease, viral hepatitis, mental disorders due to substance abuse, septicemia, chronic obstructive pulmonary disease, and assault.

Table 5.11 Multiple causes of death among people diagnosed with HIV by housing status, 2009-2020, San Francisco

		Housing status from HIV diagnosis to death	
		Ever homeless	Consistently housed
		Number (%)	
	Total	**641**	**2,293**
Multiple Causes of Death[1]	HIV	357 (55.7)	1,374 (59.9)
	AIDS opportunistic illness	152 (23.7)	492 (21.5)
	AIDS cancer	34 (5.3)	131 (5.7)
	Heart disease	155 (24.2)	755 (32.9)
	Non-AIDS cancer	68 (10.6)	513 (22.4)
	Accidents	160 (25.0)	284 (12.4)
	Drug overdose	141 (22.0)	231 (10.1)
	Renal disease	80 (12.5)	252 (11.0)
	Liver disease	79 (12.3)	248 (10.8)
	Viral hepatitis	91 (14.2)	227 (9.9)
	Mental disorders due to substance abuse	94 (14.7)	218 (9.5)
	Septicemia	69 (10.8)	212 (9.3)
	Chronic obstructive pulmonary disease	52 (8.1)	166 (7.2)
	Diabetes	13 (2.0)	140 (6.1)
	Cerebrovascular disease	22 (3.4)	106 (4.6)
	Suicide	13 (2.0)	86 (3.8)
	Pneumonitis	13 (2.0)	39 (1.7)
	Diseases of arteries	5 (0.8)	35 (1.5)
	Hyperlipidemia	2 (<1.0)	31 (1.4)
	Assault	16 (2.5)	11 (<1.0)

1 Includes underlying and contributory causes of death. Individuals may have more than one cause of death. See Technical Notes "Death Ascertainment." Deaths among people with HIV that lack cause of death information are not represented in this table.

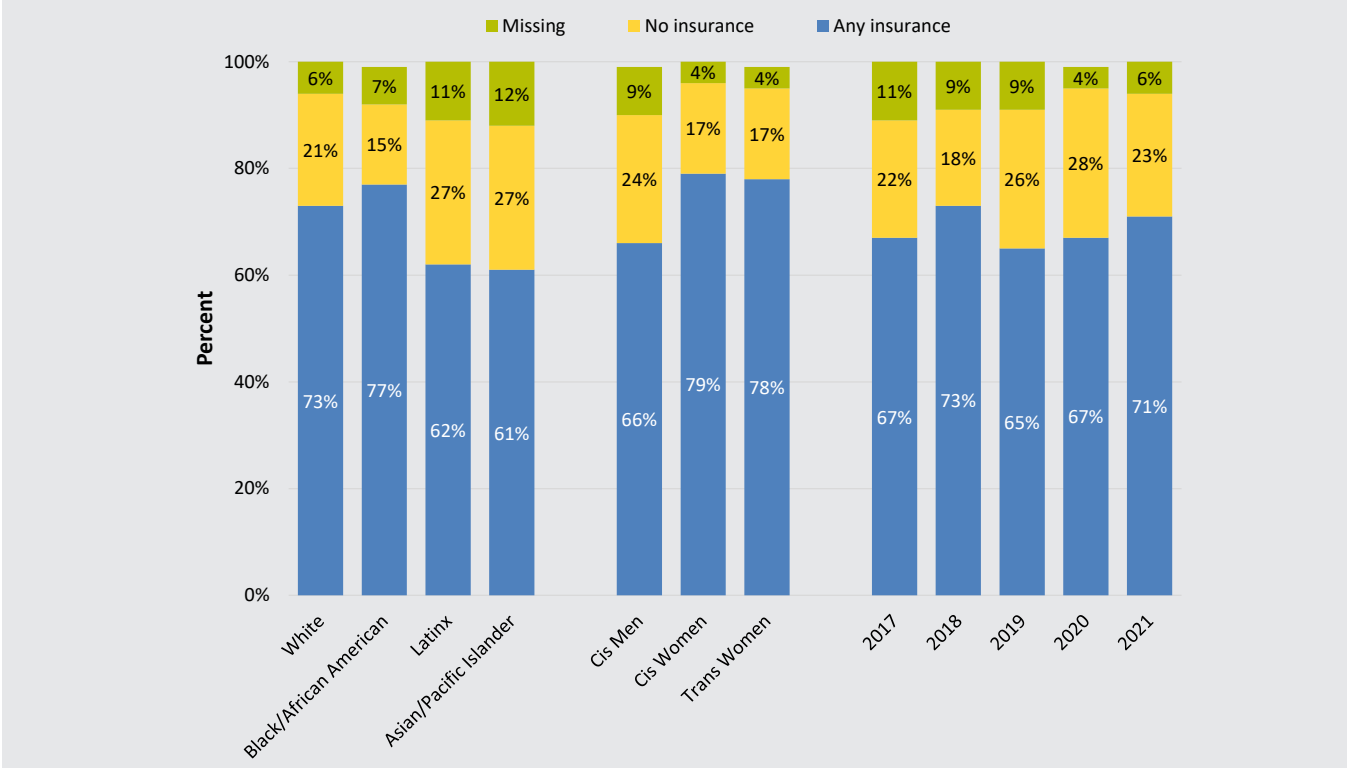
6 Health Insurance Status at Time of HIV Diagnosis

66%
OF PEOPLE NEWLY DIAGNOSED IN 2017-2021 HAD HEALTH INSURANCE WHILE

24%
DID NOT HAVE HEALTH INSURANCE

- Among people diagnosed with HIV in 2017 to 2021, 73% of Whites, 77% of Black/African Americans, 62% of Latinx, and 61% of Asians/Pacific Islanders (APIs) had health insurance at time of diagnosis.
- Twenty-seven percent of Latinx and APIs diagnosed 2017 to 2021 had no insurance at diagnosis.
- APIs and Latinx people had higher proportions missing health insurance status information than Whites and Black/African Americans.
- By gender, cis men had the highest proportion with no insurance at diagnosis (24%).
- Around two-thirds of people diagnosed each year had health insurance; almost three-quarters of people diagnosed in 2018 had health insurance.
- The proportion of people each year with no health insurance at diagnosis was highest in 2020 (28%); health insurance status and retention of health coverage may have been impacted by the shelter-in-place period and other pandemic factors the first year of the COVID-19 pandemic.

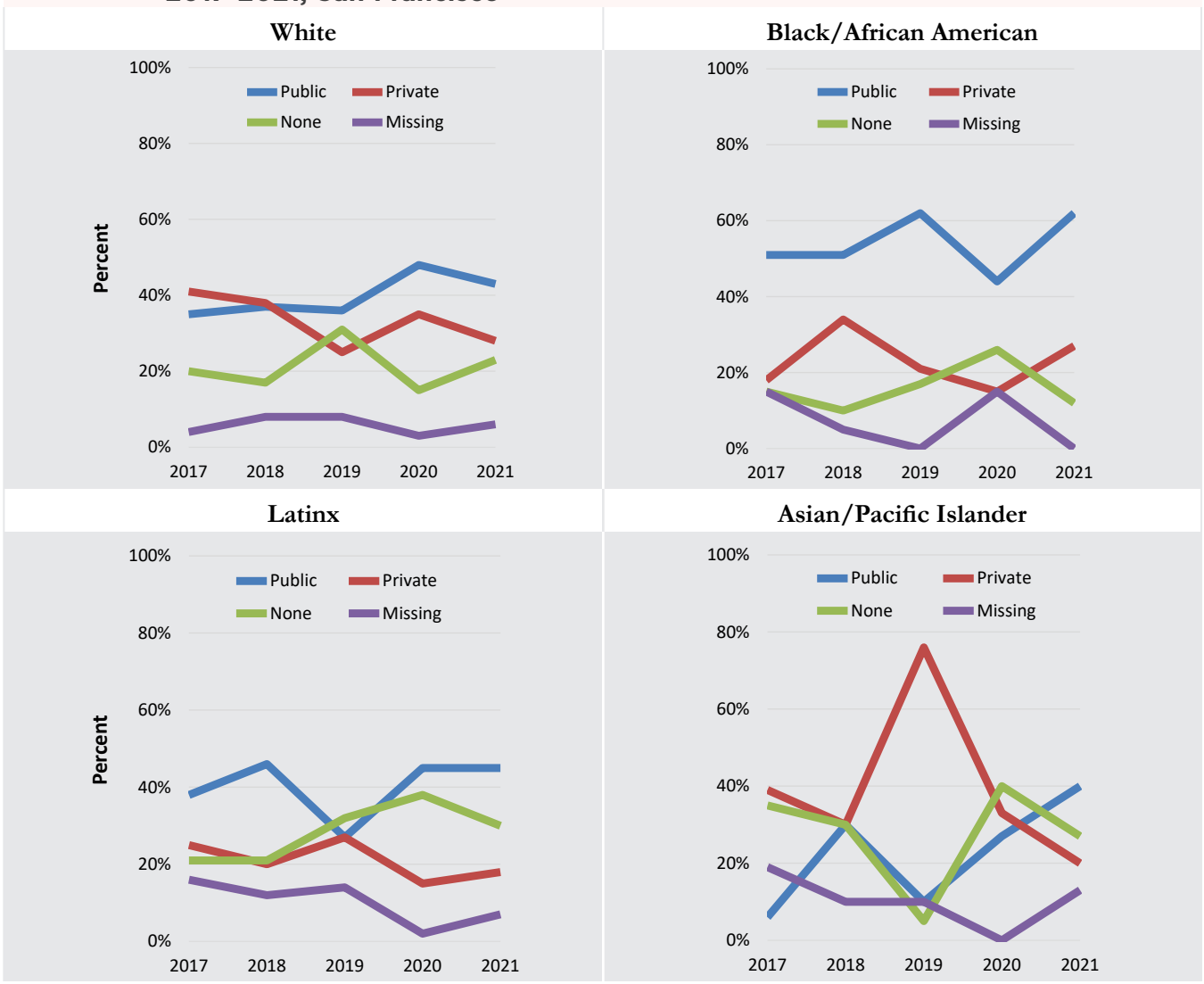
Figure 6.1 Health insurance status at time of HIV diagnosis by race/ethnicity, gender[1], and year of diagnosis, 2017-2021, San Francisco



1 Data on trans men are not presented due to small numbers and potential small population size. See Technical Notes "Gender Status."

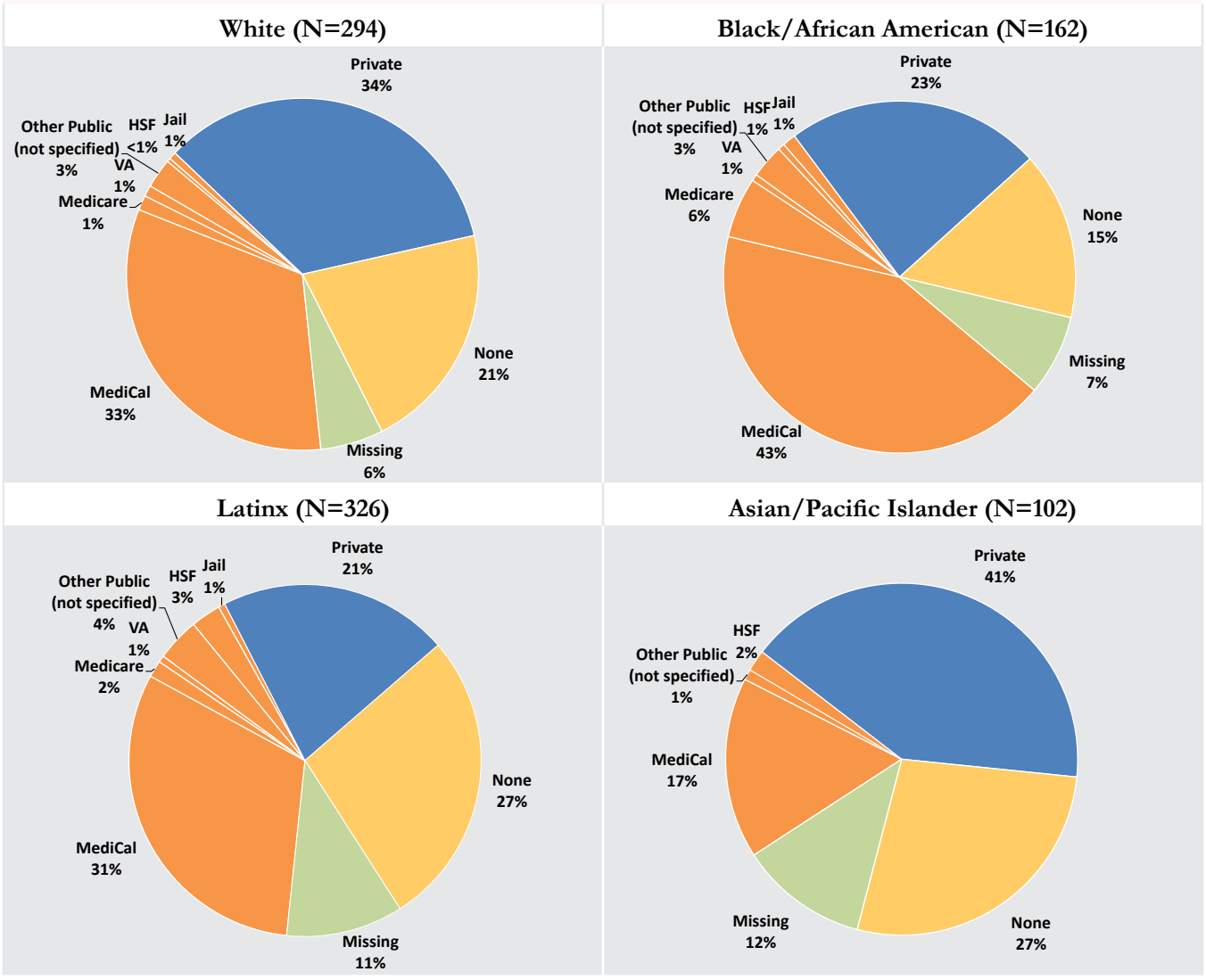
- Among Whites and from 2017 through 2021, the proportion with public insurance increased from 35% to 43%, while the proportion with private insurance decreased from 41% to 28%.
- During this five-year period, between 44% and 62% of Black/African Americans diagnosed each year were publicly insured.
- While there were increases in the proportion of Latinx publicly insured, in the same time period proportions of Latinx diagnoses who were privately insured declined. The proportion of Latinx with no health insurance also increased overall in this time period to 30%.
- There was more fluctuation in insurance patterns among APIs in this time period due to a smaller population size.

Figure 6.2 Trends in health insurance status at time of HIV diagnosis by race/ethnicity, 2017-2021, San Francisco



- From 2017 to 2021, 73% of Whites, 77% of Black/African Americans, 62% of Latinx, and 61% of Asians/Pacific Islanders were insured at the time of HIV diagnosis.
- Black/African Americans had the highest proportion (54%) with publicly funded insurance types compared to other racial/ethnic groups.
- Asians/Pacific Islanders had the highest proportion (41%) with privately funded insurance compared to other racial/ethnic groups.
- Latinx and Asians/Pacific Islanders both had the highest proportion uninsured (27%).

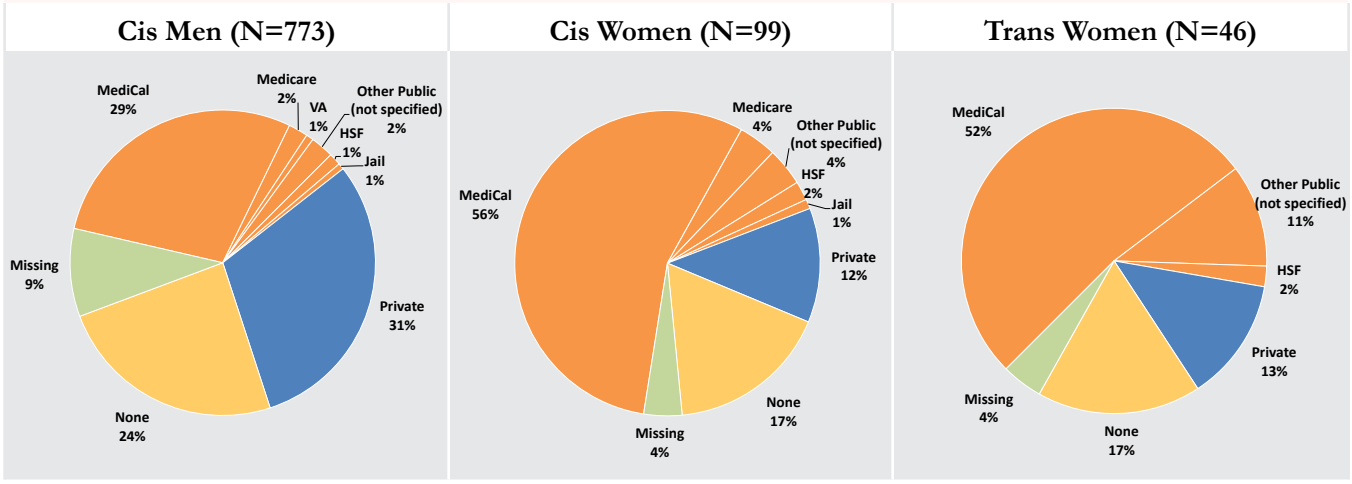
Figure 6.3 Health insurance status at time of HIV diagnosis by race/ethnicity, 2017-2021, San Francisco



HSF: Healthy San Francisco.

- Compared to cis men at the time of HIV diagnosis in 2017 to 2021, cis women and trans women had higher proportions with public insurance (including MediCal, Medicare, Healthy San Francisco, Veteran Administration, county jail, and other unspecified public insurance).
- Fifty-six percent of cis women and 52% of trans women had MediCal, state-sponsored insurance for people meeting financial criteria, compared to 29% of cis men.
- Healthy San Francisco, the county-sponsored health access program for residents, was used by 1% of cis men, 2% of cis women, and 2% of trans women at time of diagnosis.
- Twenty-four percent of cis men and 17% of both cis women and trans women had no health insurance coverage at time of diagnosis.

Figure 6.4 Health insurance status at time of HIV diagnosis by gender[1], 2017-2021, San Francisco



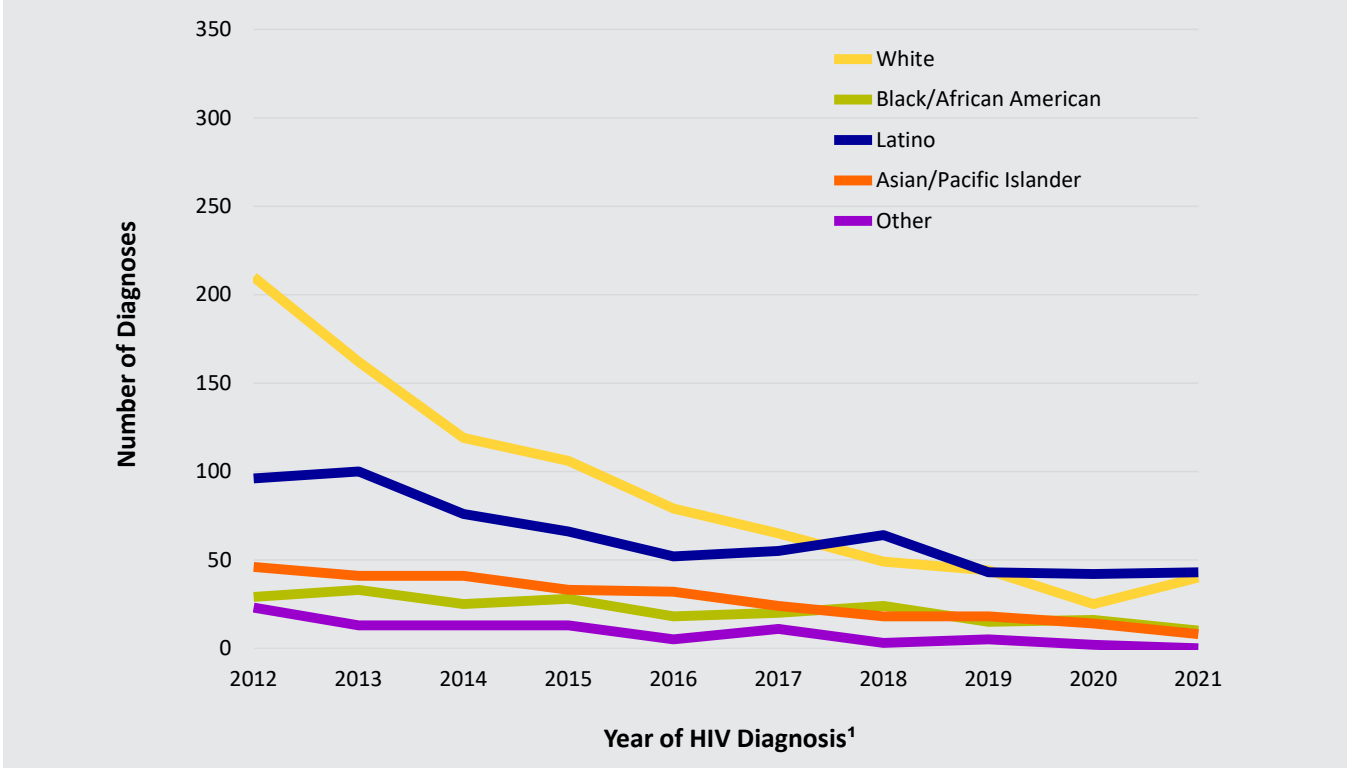
1 Data on trans men are not presented due to small numbers. See Technical Notes "Gender Status."
HSF: Healthy San Francisco.

7 HIV among Men who Have Sex with Men

Latinos
ACCOUNTED FOR THE HIGHEST PROPORTION OF NEWLY DIAGNOSED MSM IN 2021

- The number of White MSM newly diagnosed with HIV consistently declined from 2012 to 2020 and increased in 2021.
- The annual number of Black/African American MSM diagnosed was steady in 2019 and 2020 and declined in 2021.
- Diagnoses of Latino MSM were steady from 2019 to 2021 and exceeded the number of White MSM for both years of the COVID-19 pandemic (2020 and 2021).
- Annual diagnoses of Asian/Pacific Islander (API) MSM were level in 2018 and 2019 and declined each year in 2020 and 2021.
- Among MSM newly diagnosed in 2021, Latinos accounted for the highest proportion at 43% followed by 40% White, 10% Black/African American, and 8% API.

Figure 7.1 Number of MSM newly diagnosed with HIV by race/ethnicity, 2012-2021, San Francisco

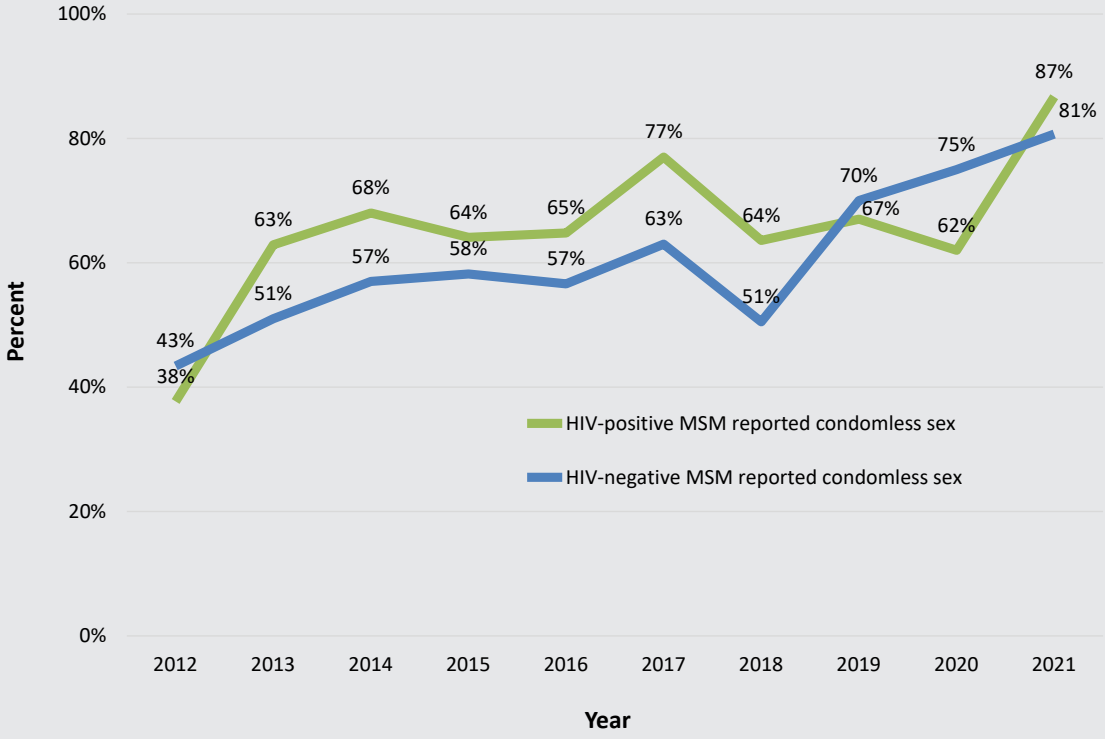


1 Includes MSM and MSM-PWID with HIV by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

HIV sexual behavior data

- Data from the STOP AIDS Project showed that the percent of HIV-negative MSM who reported any condomless anal intercourse in the past six months increased from 43% in 2012 to 81% in 2021.
- The proportion of HIV-positive MSM reporting any condomless anal intercourse in the past six months generally remained above 60% from 2013 through 2020, and then increased to 87% in 2021.
- These data provide an overall estimate of condomless sex in a small sample of MSM and do not consider other factors related to HIV prevention such as use of pre-exposure prophylaxis (PrEP), viral suppression or serosorting (having sex with only those who have the same HIV status). For example, in recent years the amount of condomless sex may be lower among HIV-negative MSM who are not on PrEP.

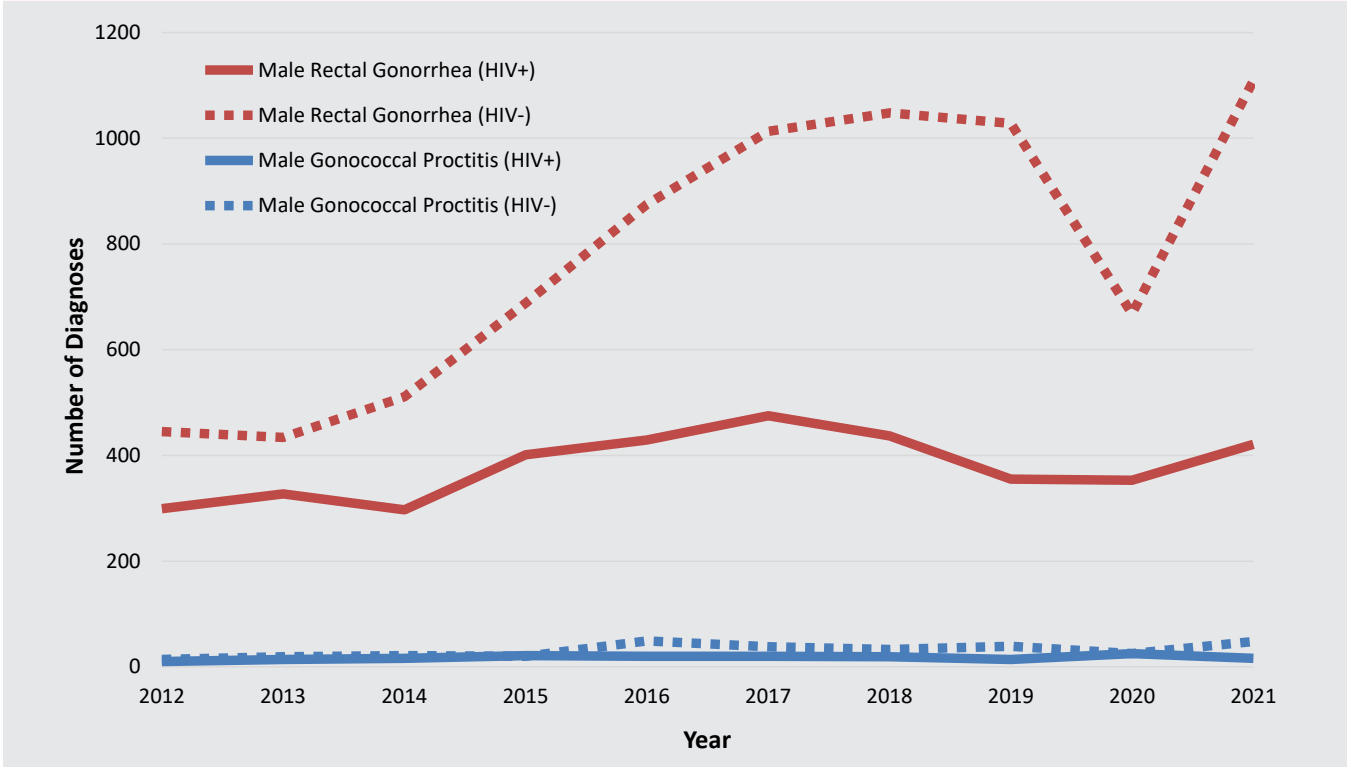
Figure 7.2 Percent of MSM reporting condomless anal intercourse in the last six months by self-reported HIV status, the STOP AIDS Project, 2012-2021, San Francisco



Sexually transmitted infections among MSM

- The number of reported rectal gonorrhea diagnoses among HIV-positive MSM peaked at 475 in 2017, declined to 353 in 2020, and increased to 421 in 2021.
- The number of reported rectal gonorrhea diagnoses among HIV-negative MSM has increased steadily since 2012, declined markedly from 1,028 in 2019 to 668 in 2020, and then increased to a peak of 1,109 in 2021.
- The number of rectal gonorrhea diagnoses has been higher among HIV-negative MSM than among HIV-positive MSM from 2012 through 2021.
- The number of male gonococcal proctitis diagnoses was notably lower, likely due to differences in how the data were reported, and has been relatively stable.

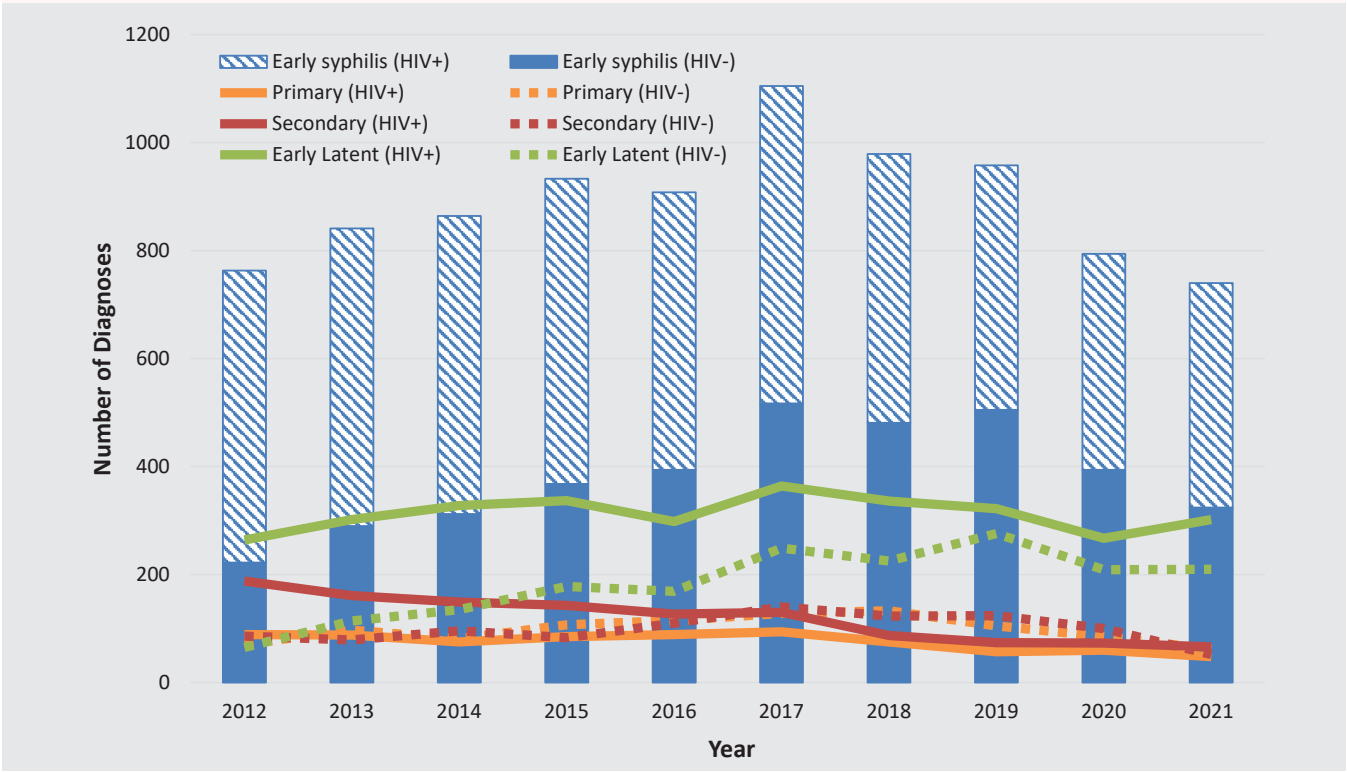
Figure 7.3 Male rectal gonorrhea and male gonococcal proctitis among MSM by HIV serostatus[1], 2012-2021, San Francisco



1 Data on male rectal gonorrhea and gonococcal proctitis originate from San Francisco Department of Public Health STI case registry.

- The number of early syphilis diagnoses, including primary, secondary, and early latent, increased from 2012 to 2017 and declined in recent years irrespective of HIV serostatus.
- HIV-positive MSM accounted for a greater proportion of early syphilis diagnoses during 2012 through 2021, with an exception in 2019 at 47%. However, the proportion of HIV-positive MSM among early syphilis diagnoses has declined over the years from 71% in 2012 to 56% in 2021.

Figure 7.4 Early syphilis among MSM by HIV serostatus[1], 2012-2021, San Francisco

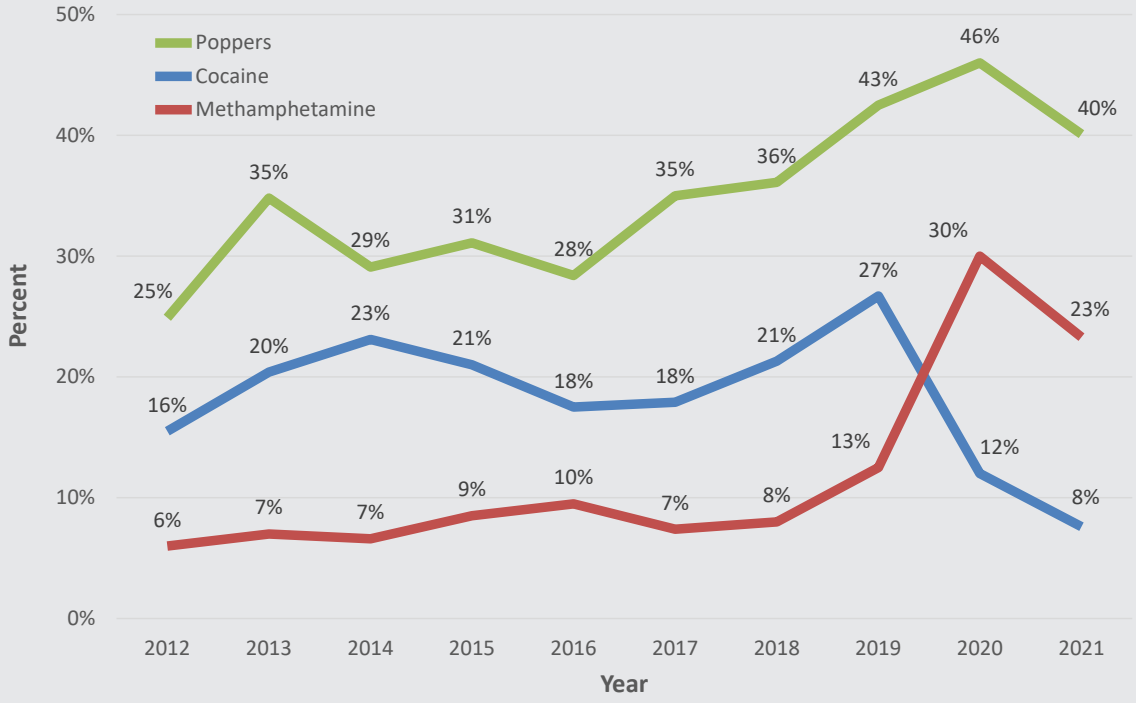


1 Data on early syphilis originate from San Francisco Department of Public Health STI case registry.

Substance use

- Data from the STOP AIDS Project showed that cocaine use fluctuated from 16% in 2012 to a high of 27% in 2019 and deceased in 2020 and 2021.
- Popper use increased from a low of 25% in 2012 to a high of 46% in 2020.
- Methamphetamine use was relatively stable from 2012 to 2018 then increased in 2019 and 2020 and decreased in 2021.
- In 2021, the decrease in use of all three drugs may be because of a change in survey methodology. Data collected from June 2021 to December 2021 were via online survey. All recruitment was completed through social media and dating app advertising. This is different than in-person data collection at events and outside bars in the previous years.

Figure 7.5 Substance use among MSM, the STOP AIDS Project, 2012-2021, San Francisco



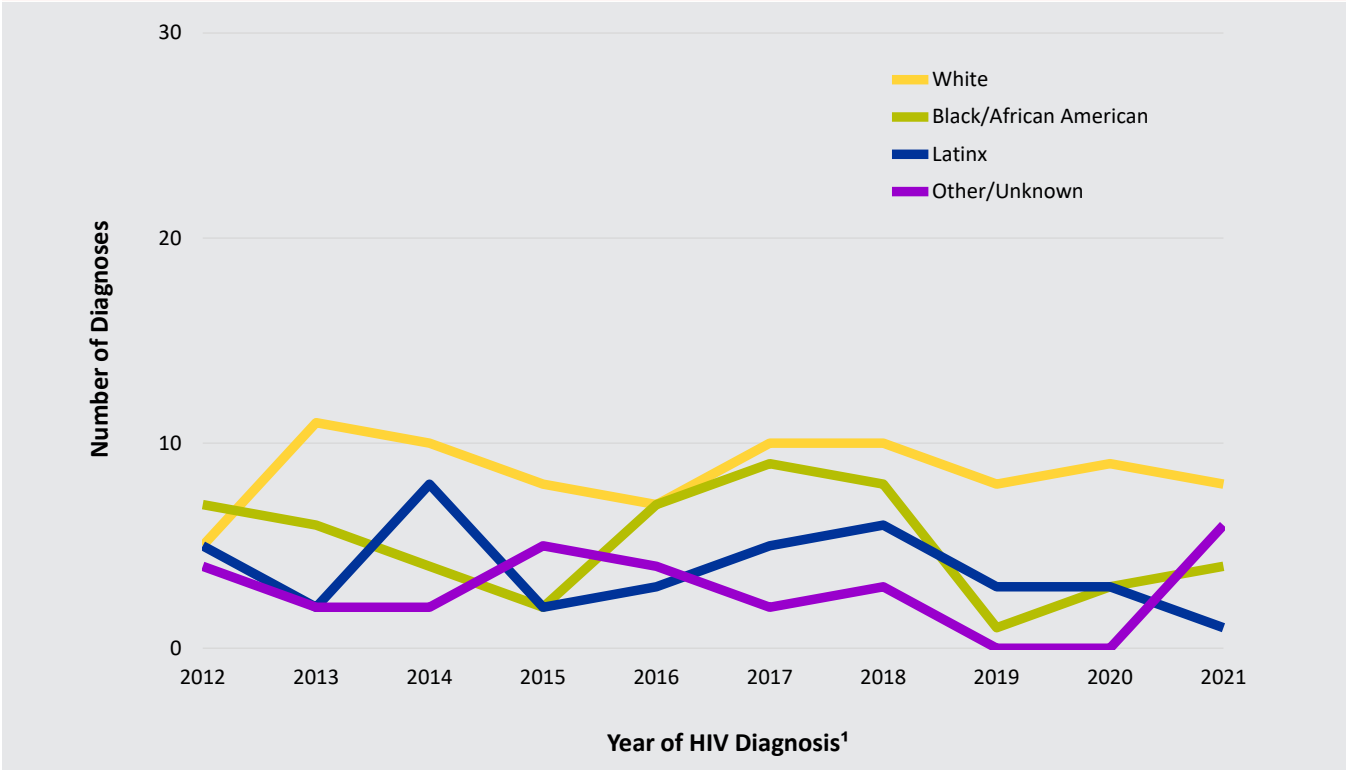
8 HIV among People who Inject Drugs

Whites

ACCOUNTED FOR 42% OF PWID NEWLY DIAGNOSED WITH HIV FROM 2012-2021

- From 2012 to 2021, Whites accounted for 42% of PWID (not including MSM-PWID or TWSM-PWID) newly diagnosed with HIV, Black/African Americans 25%, and Latinx 19%.
- From 2016 to 2018, there was an increase in the total annual number of PWID diagnosed with HIV; although the total annual number declined in 2019, it has increased through 2020 and 2021.

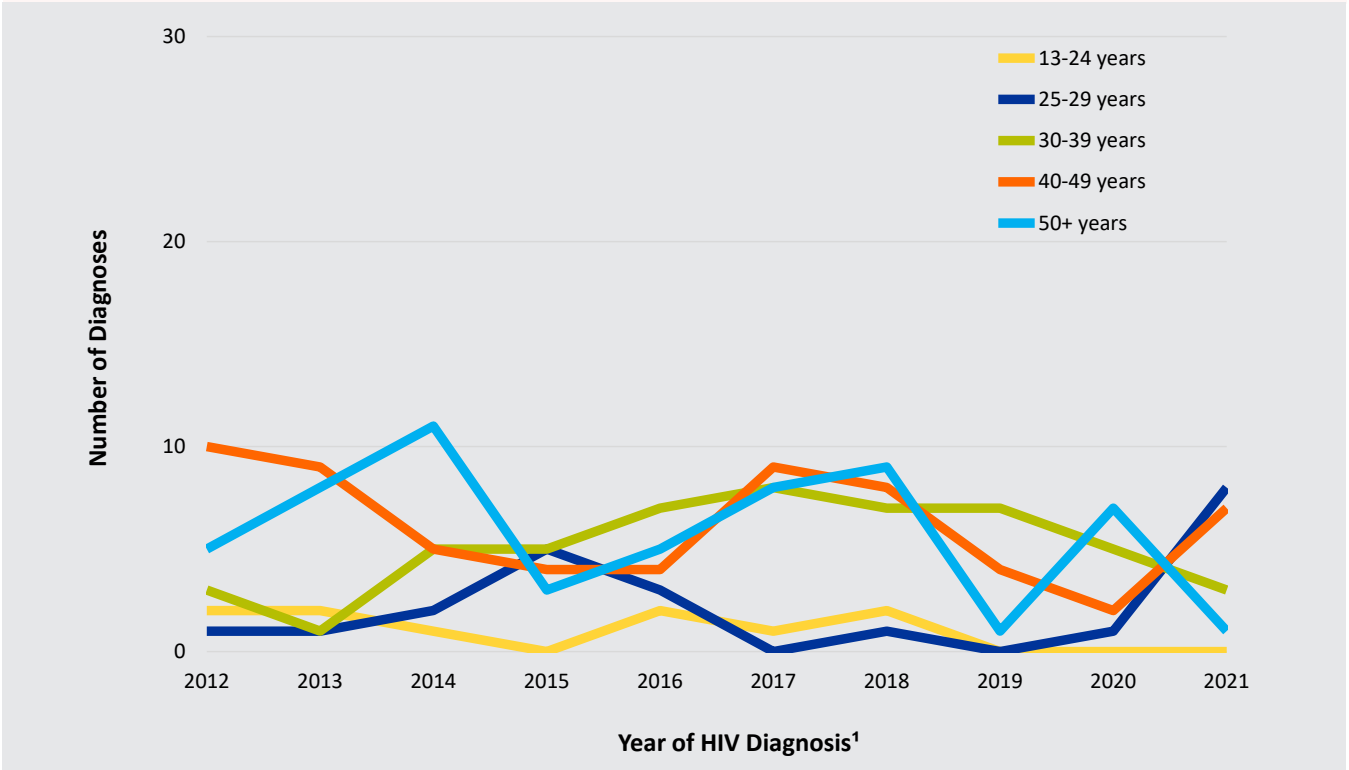
Figure 8.1 Number of PWID newly diagnosed with HIV by race/ethnicity, 2012-2021, San Francisco



1 Includes PWID (who are not MSM-PWID or TWSM-PWID) by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

- Overall, from 2012 through 2021 people who were aged 40-49 years made up 31% of newly diagnosed PWID, and 29% were aged 50 years and older.
- The annual numbers of new HIV diagnoses among PWID aged 18-24 years and 25-29 years remained low; there were no diagnoses among PWID under 25 years in 2019 to 2021.
- There was an uptick of new diagnoses among PWID aged 25-29 and 40-49 years in 2021.

Figure 8.2 Number of PWID newly diagnosed with HIV by age group at HIV diagnosis, 2012-2021, San Francisco

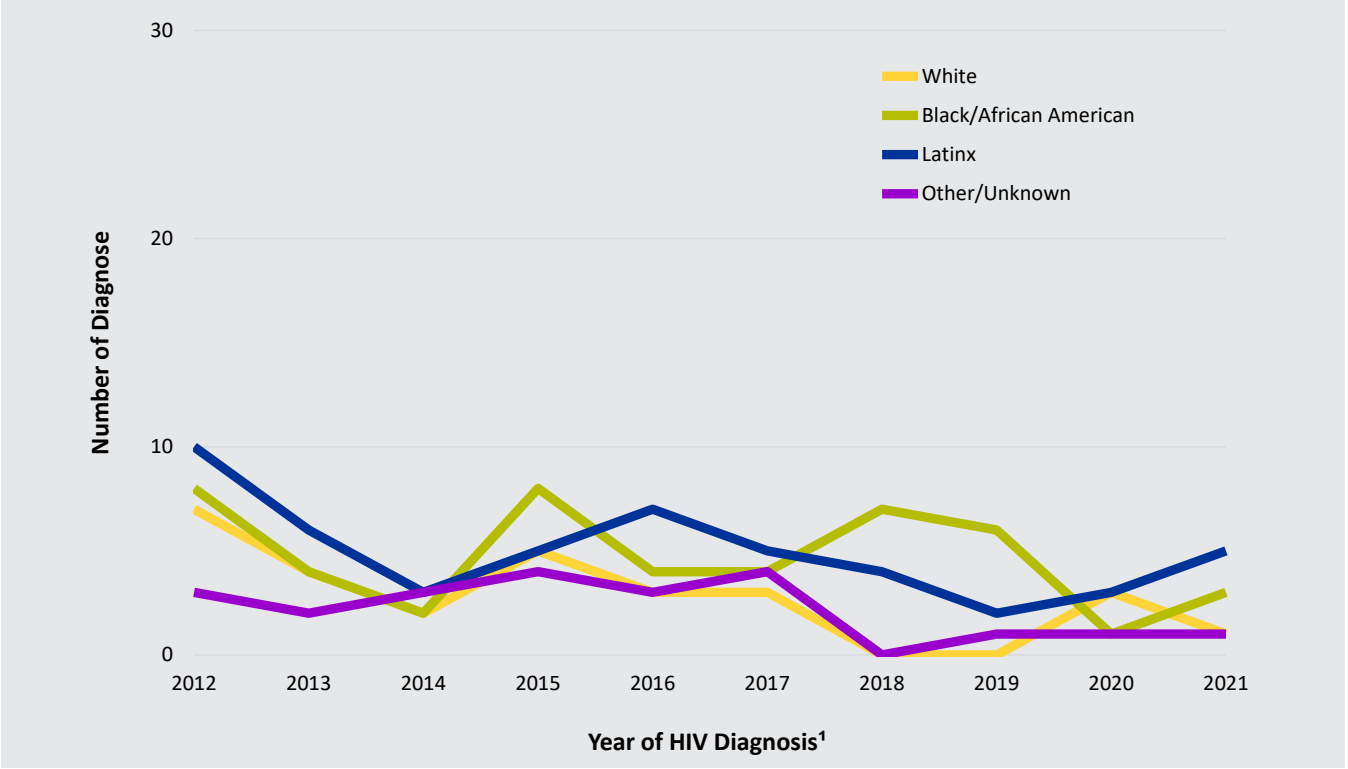


1 Includes PWID (who are not MSM-PWID or TWSM-PWID) by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

9 HIV among Heterosexuals

- Annual HIV diagnoses among people who acquired HIV through heterosexual contact were very low; there were a total of 10 diagnoses in 2021.
- No racial/ethnic group had more than 10 diagnoses per year in 2012 to 2021.
- Among people who acquired HIV through heterosexual contact in 2012 through 2021, Latinx accounted for 34%, Black/African Americans for 32%, and Whites 19%.

Figure 9.1 Number of heterosexuals newly diagnosed with HIV by race/ethnicity, 2012-2021, San Francisco

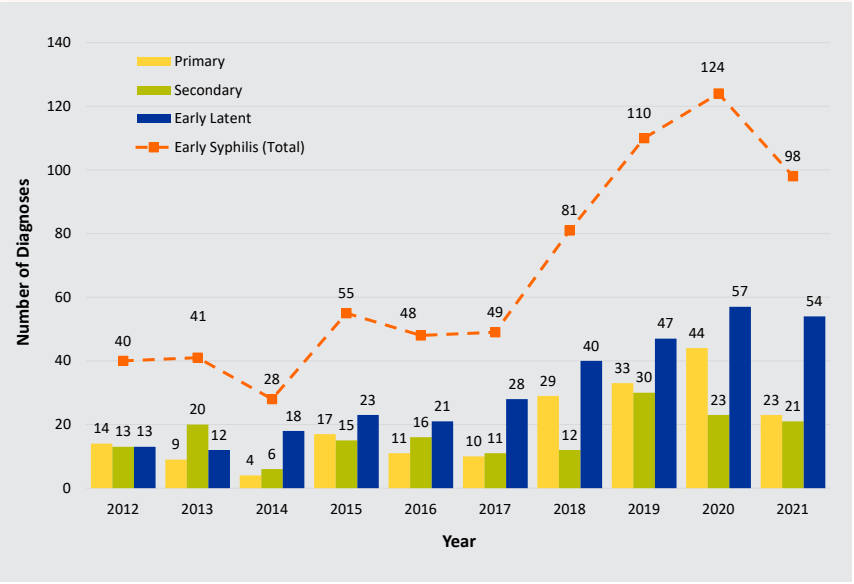


1 Includes people with HIV by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

Sexually transmitted infections among heterosexuals

- Overall, the number of early syphilis diagnoses among heterosexual cis men, regardless of HIV status, has increased over time, reached a high of 124 in 2020 and then decreased to 98 in 2021.
- For most years, there was a higher number of early latent syphilis compared to primary and secondary syphilis diagnoses.

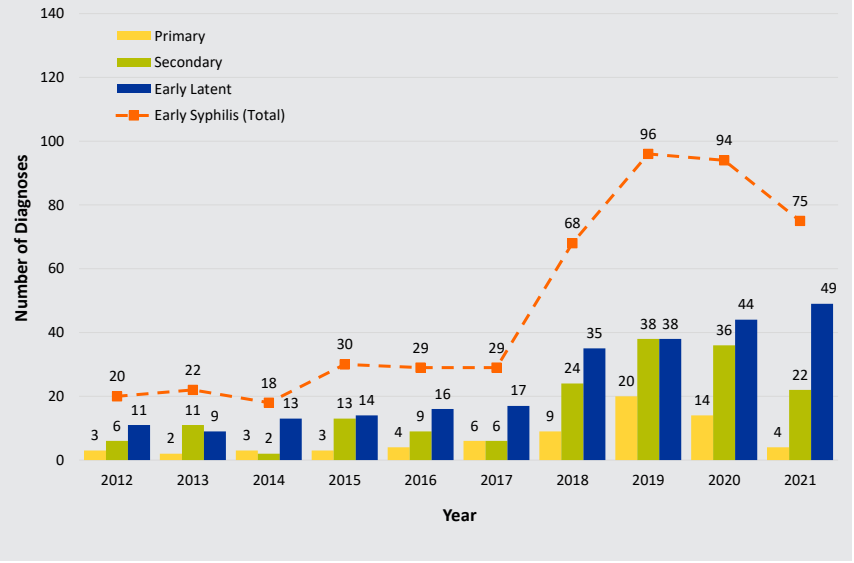
Figure 9.2 Early syphilis among heterosexual cis men[1], 2012-2021, San Francisco



1 Data on early syphilis originate from San Francisco Department of Public Health STI case registry.

- Among cis women, regardless of HIV status, the number of early syphilis diagnoses also increased over time, reached a peak of 96 in 2019, and remained stable at 94 in 2020. In 2021, the number of early syphilis diagnoses decreased to 75.
- The decrease in early syphilis diagnoses among cis women in 2021 was due to the decreases in primary and secondary syphilis. The number of early latent diagnoses continued to rise in 2021.
- The number of early syphilis diagnoses among cis women was lower relative to cis men.
- For most years, there was a higher number of early latent syphilis compared to primary and secondary syphilis diagnoses.

Figure 9.3 Early syphilis among cis women[1], 2012-2021, San Francisco

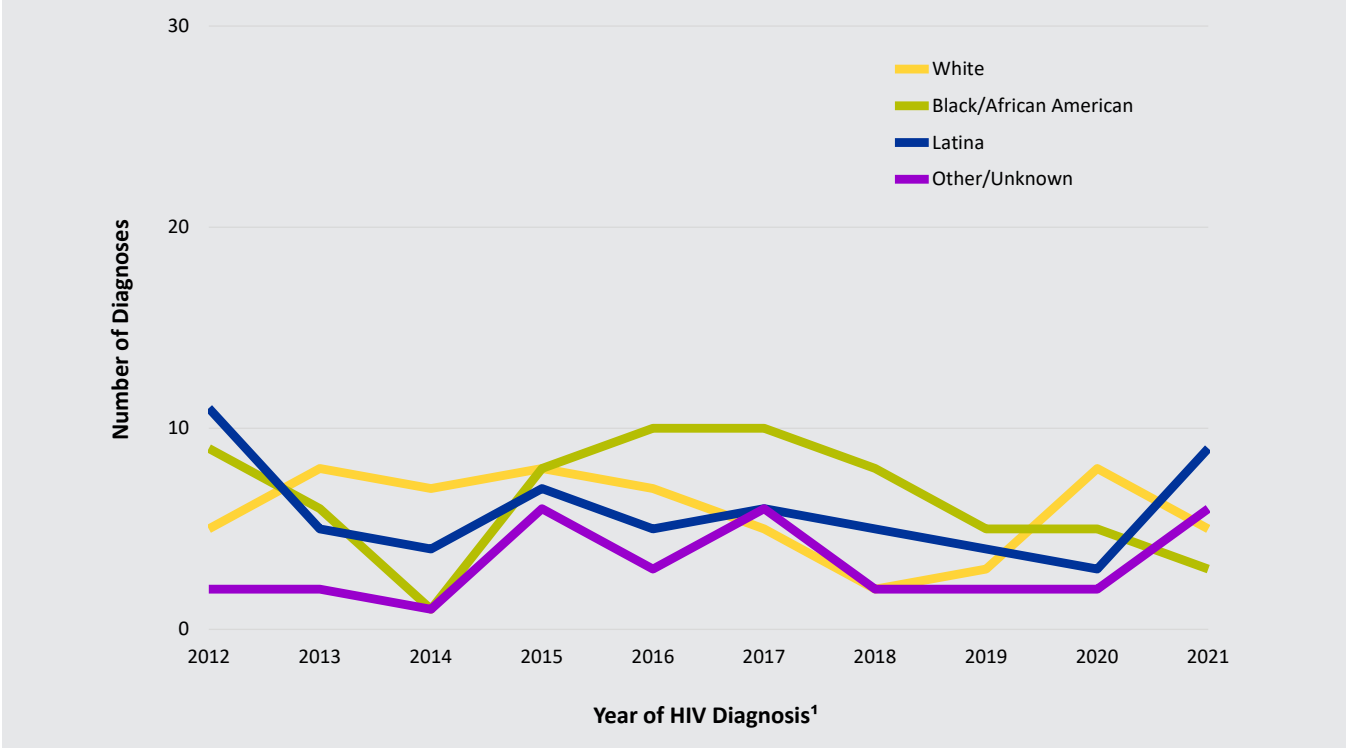


1 Data on early syphilis originate from San Francisco Department of Public Health STI case registry.

10 HIV among Cis Women

- Among cis women newly diagnosed with HIV during 2012 through 2021, Whites accounted for 27% of diagnoses, Black/African Americans accounted for 30%, and Latinas accounted for 28%.
- In 2021, the total number of cis women diagnosed with HIV increased to 23 from 18 in 2020.
- While the absolute numbers of new diagnoses among White and Black/African American cis women declined from 2020 to 2021, the number of Latinas newly diagnosed increased from three to nine.

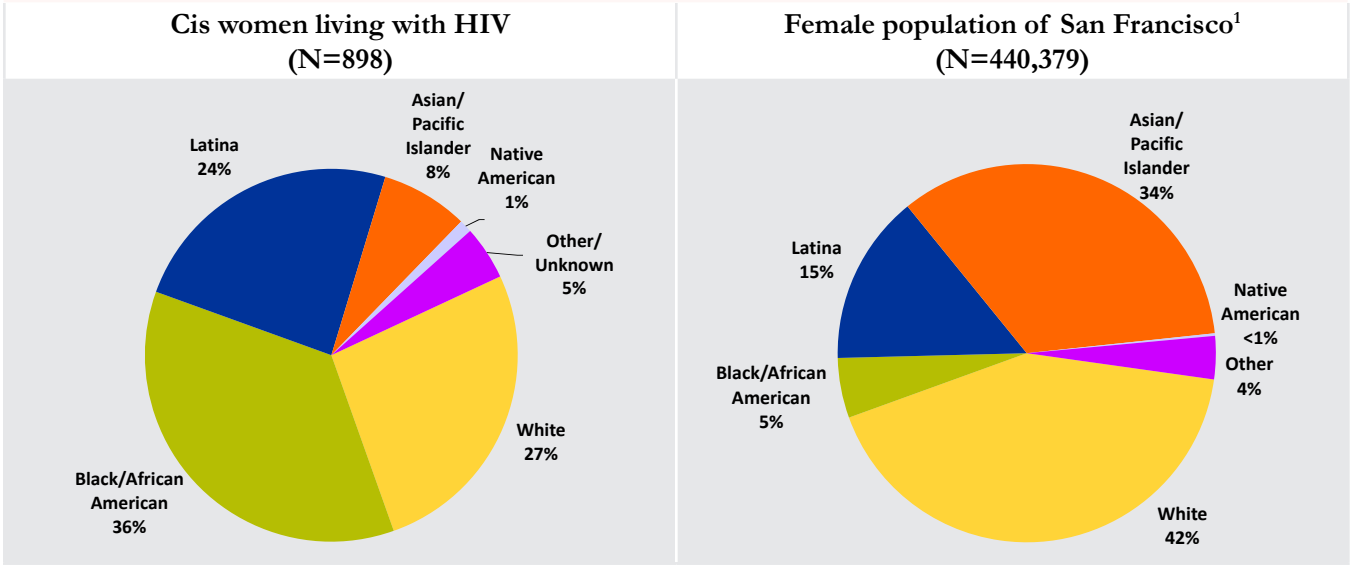
Figure 10.1 Number of cis women newly diagnosed with HIV by race/ethnicity, 2012-2021, San Francisco



1 Includes cis women with HIV by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

- Although Black/African American women represented 5% of the total female population in San Francisco (pie chart on the right), as of December 31, 2021 they accounted for 36% of cis women living with HIV in San Francisco (pie chart on the left).

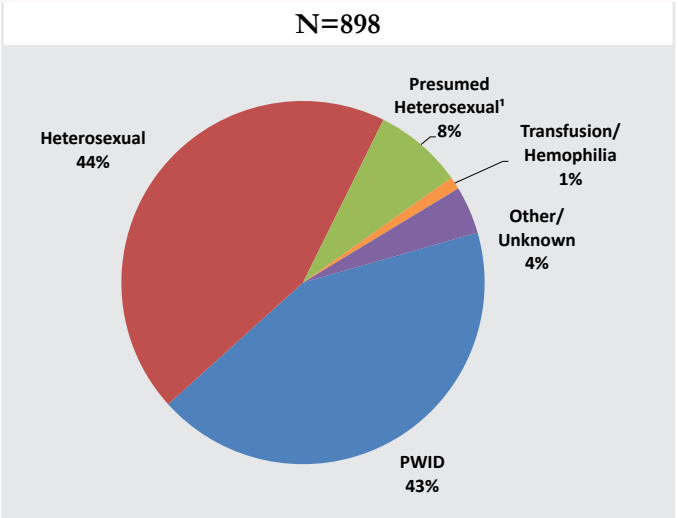
Figure 10.2 Cis women living with HIV diagnosed through December 2021 and female population by race/ethnicity, San Francisco



1 California Department of Finance estimate San Francisco female population 2021.

- Among cis women diagnosed and living with HIV in San Francisco through the end of 2021, 43% acquired HIV through injecting drugs and 52% through heterosexual contact.

Figure 10.3 Cis Women living with HIV diagnosed through December 2021 by transmission category, San Francisco



1 See Technical Notes "Female Presumed Heterosexual Contact."

11 HIV among Children, Adolescents and Young Adults

Latinx

ACCOUNTED FOR 38% OF YOUNG ADULTS LIVING WITH HIV AS OF 12/31/2021

- Adolescents (current age 13-17 years) or young adults (current age 18-24 years) living with HIV in San Francisco make up fewer than 1% of people living with HIV in the city.
- As of December 31, 2021 there were fewer than five adolescents and 50 young adults living with HIV.
- Among young adults living with HIV, 70% were MSM and 6% were MSM-PWID (there were no young adults who were non-MSM PWID).
- Thirty-eight percent of young adults living with HIV were Latinx, 30% were Black/African American, 14% were Asian/Pacific Islander, and 10% were White.

Table 11.1 Characteristics of young adults living with HIV, December 2021, San Francisco

		18 - 24 Years Old
		Number (%)
	Total	50
Transmission Category	MSM	35 (70)
	MSM-PWID	3 (6)
	Heterosexual	5 (10)
	Perinatal	3 (6)
	Other/Unidentified[1]	4 (8)
Gender[2]	Cis Men	39 (78)
	Cis and Trans Women	11 (22)
Race/Ethnicity	White	5 (10)
	Black/African American	15 (30)
	Latinx	19 (38)
	Asian/Pacific Islander	7 (14)
	Other/Unknown	4 (8)

1 Includes TWSM, TWSM-PWID, and people with no identified risk factor.
2 Data on cis and trans women are not released separately due to small numbers. See Technical Notes "Gender Status."

- For the years 2017-2021 and compared to the U.S., San Francisco had lower proportions of adolescents and young adults diagnosed with HIV.
- Diagnoses among people aged 20-24 years in San Francisco ranged from 6% to 13% of total diagnoses from 2017 to 2021.

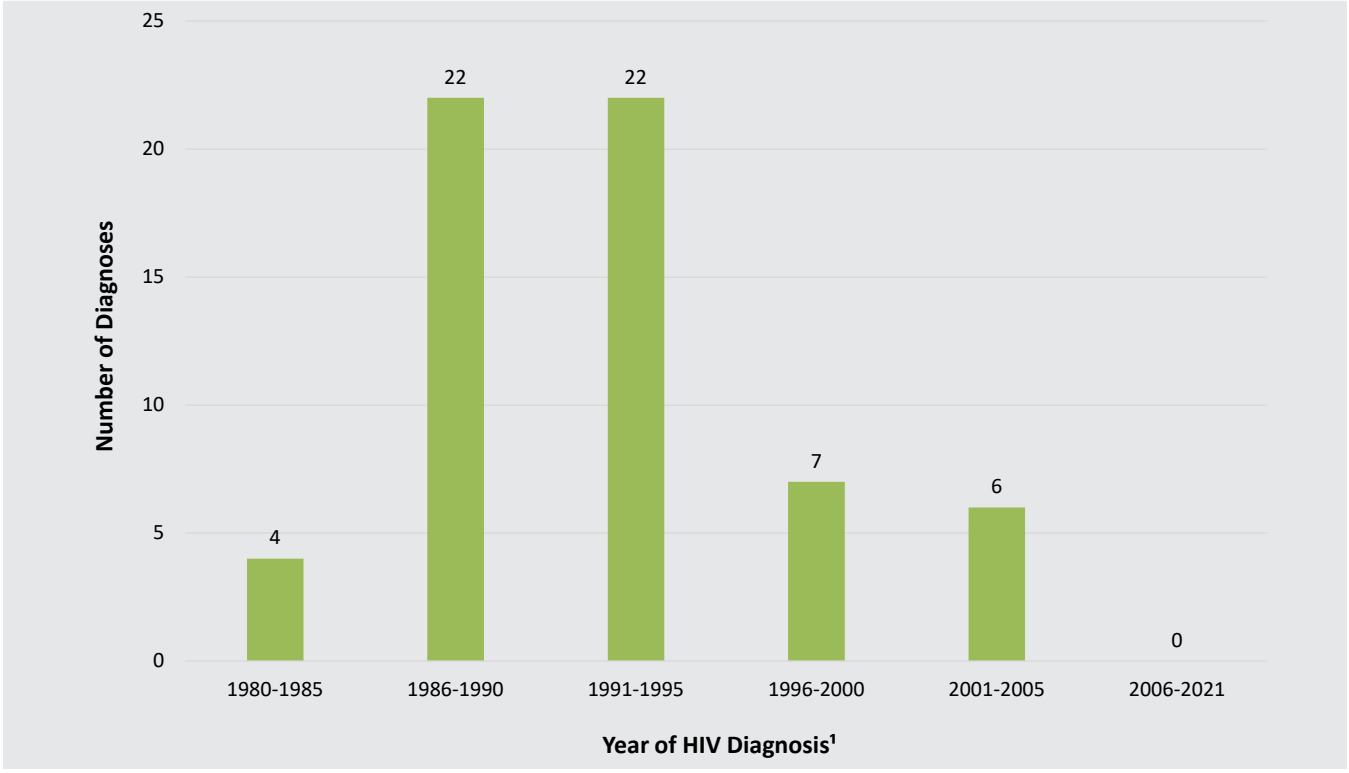
Table 11.2 Number of adolescents and young adults newly diagnosed with HIV, 2017-2021, San Francisco and the United States

		Year of HIV Diagnosis				
		2017	2018	2019	2020	2021
		Number (%)				
San Francisco	All ages	240	212	173	138	160
	Age 13-19 years at HIV diagnosis	8 (3)	5 (2)	3 (2)	0 (0)	2 (1)
	Age 20-24 years at HIV diagnosis	21 (9)	28 (13)	13 (8)	17 (12)	10 (6)
U.S.[1]	All ages	38,881	37,955	36,997	30,692	N/A
	Age 13-19 years at HIV diagnosis	1,823 (5)	1,756 (5)	1,675 (5)	1,268 (4)	N/A
	Age 20-24 years at HIV diagnosis	6,532 (17)	6,171 (16)	6,026 (16)	4,867 (16)	N/A

1 U.S. data are based on reported diagnoses from the 50 states and 6 dependent areas with confidential HIV reporting in CDC, HIV Surveillance Report, 2020 (volume 33).

- As of December 31, 2021 there was a cumulative total of 61 pediatric HIV diagnoses (children less than 13 years old) who resided in San Francisco at time of diagnosis.
- The number of pediatric HIV diagnoses peaked during 1986 through 1995, and has declined over time, with zero pediatric HIV diagnoses among residents of San Francisco during 2005 to 2021.

Figure 11.1 Number of children diagnosed with HIV, 1980-2021, San Francisco



1 See Technical Notes "Date of Initial HIV Diagnosis."

12 HIV among People Aged 50 Years and Older

- As of December 31, 2021, 72% (N=11,295) of people living with HIV were aged 50 years and older and of these 32% were aged 65 years old (N=3,563), and thus eligible for Medicare benefits.
- Among those aged 50 years and older, 64% were White, 17% were Latinx, 11% were Black/African American, and 5% were Asian/Pacific Islander compared to 39%, 33%, 13%, and 11%, respectively, among those under age 50.

72%
OF PLWH WERE AGED 50 YEARS AND OLDER AS OF 12/31/2021

Table 12.1 Characteristics of people living with HIV by age group, December 2021, San Francisco

		As of 12/31/2021		
		Age < 50 years	Age ≥ 50 years	Age ≥ 65 years
		Number (%)		
	Total	**4,336**	**11,295**	**3,563**
Gender[1]	Cis Men	3,809 (88)	10,493 (93)	3,365 (94)
	Cis Women	302 (7)	596 (5)	167 (5)
	Trans Women	217 (5)	204 (2)	29 (1)
Race/Ethnicity	White	1,670 (39)	7,199 (64)	2,511 (70)
	Black/African American	542 (13)	1,277 (11)	428 (12)
	Latinx	1,414 (33)	1,884 (17)	407 (11)
	Asian/Pacific Islander	484 (11)	540 (5)	118 (3)
	Native American	24 (1)	37 (<1)	6 (<1)
	Other/Unknown	202 (5)	358 (3)	93 (3)
Transmission Category	MSM	2,992 (69)	8,463 (75)	2,825 (79)
	TWSM	155 (4)	98 (1)	17 (<1)
	PWID	189 (4)	633 (6)	210 (6)
	MSM-PWID	596 (14)	1,479 (13)	353 (10)
	TWSM-PWID	60 (1)	103 (1)	12 (<1)
	Heterosexual	209 (5)	361 (3)	96 (3)
	Other/Unidentified	135 (3)	158 (1)	50 (1)
Age in Years	50-54		2,233 (20)	
	55-59		3,017 (27)	
	60-64		2,482 (22)	
	65+		3,563 (32)	3,563 (100)

1 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

- Among the 11,295 people living with HIV who were aged 50 years and older as of December 31, 2021, 88% (N=9,942) were men who have sex with men (MSM) or MSM who also inject drugs (MSM-PWID).
- Among MSM, 69% were White, 16% were Latinx, and 4% were Asian/Pacific Islander among 50 years and older, compared to 42%, 32%, and 12%, respectively, among those under age 50. MSM aged 65 years and older were more likely to be White (77%) and less likely to be Latinx (10%).
- In contrast, among people living with HIV aged 50 years and older who were not MSM, 28% were White and 38% were Black/African American, compared to 69% and 8%, respectively, among MSM in the same age group.
- Unlike among MSM, the proportion of Black/African Americans among non-MSM varied across age groups, making up a low of 27% of those under age 50, 38% of those 50 years and older, and nearly half of those 65 years and older.
- Among non-MSM, those aged 50 years and older were more likely to be cis men (41%) and less likely to be trans women (15%), compared to those under age 50 (30% and 29%, respectively). These differences were even more pronounced when comparing non-MSM aged 65 years and older to those under age 50.

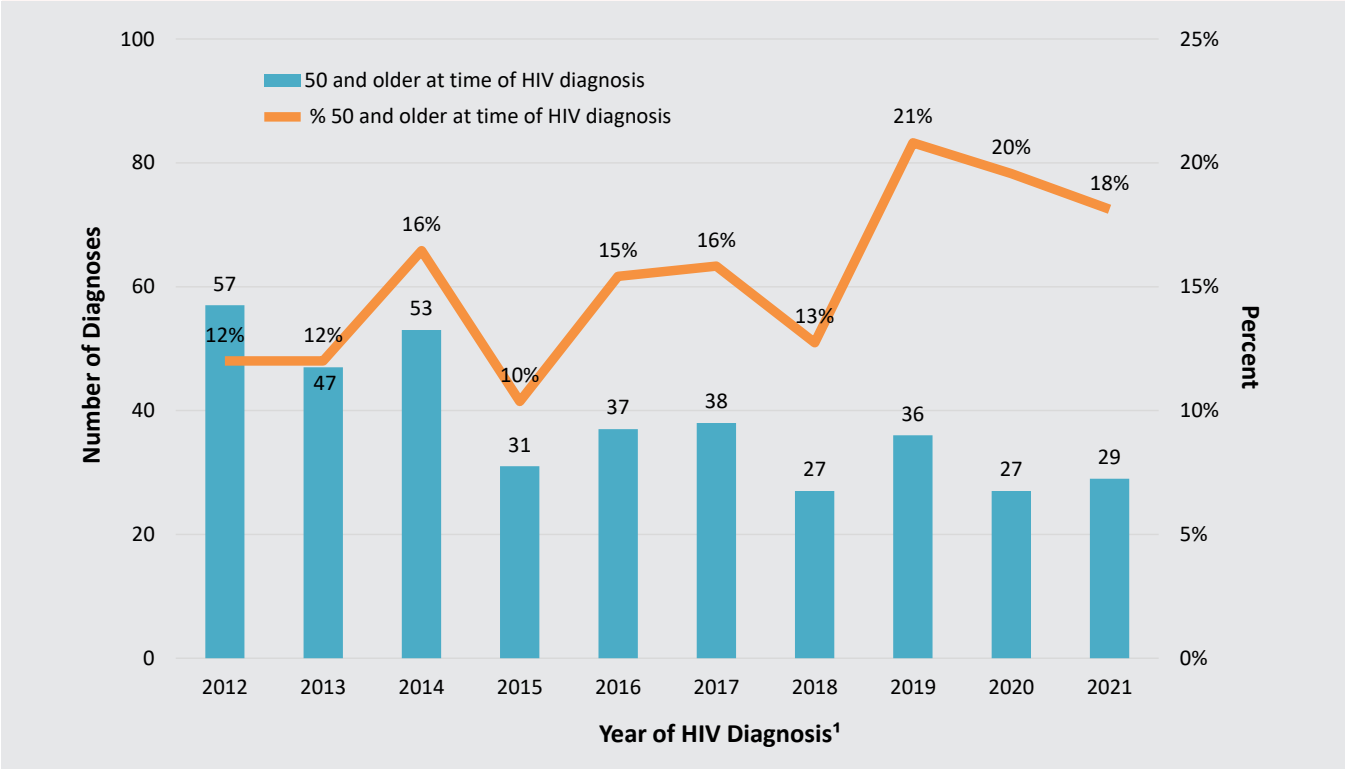
Table 12.2 Characteristics of people living with HIV by MSM transmission category and age group, December 2021, San Francisco

		PLWH as of 12/31/2021					
		MSM			Non-MSM		
		Age < 50 years	Age ≥ 50 years	Age ≥ 65 years	Age < 50 years	Age ≥ 50 years	Age ≥ 65 years
		Number (%)					
	Total	3,588	9,942	3,178	748	1,353	385
Gender[1]	Cis Men	3,588 (100)	9,942 (100)	3,178 (100)	221 (30)	551 (41)	187 (49)
	Cis Women				302 (40)	596 (44)	167 (43)
	Trans Women				217 (29)	204 (15)	29 (8)
Race/Ethnicity	White	1,499 (42)	6,819 (69)	2,434 (77)	171 (23)	380 (28)	77 (20)
	Black/African American	339 (9)	759 (8)	240 (8)	203 (27)	518 (38)	188 (49)
	Latinx	1,154 (32)	1,598 (16)	326 (10)	260 (35)	286 (21)	81 (21)
	Asian/Pacific Islander	416 (12)	447 (4)	94 (3)	68 (9)	93 (7)	24 (6)
	Other/Unknown	180 (5)	319 (3)	84 (3)	46 (6)	76 (6)	15 (4)
Transmission Category	MSM	2,992 (83)	8,463 (85)	2,825 (89)			
	TWSM				155 (21)	98 (7)	17 (4)
	PWID				189 (25)	633 (47)	210 (55)
	MSM-PWID	596 (17)	1,479 (15)	353 (11)			
	TWSM-PWID				60 (8)	103 (8)	12 (3)
	Heterosexual				209 (28)	361 (27)	96 (25)
	Other/Unidentified				135 (18)	158 (12)	50 (13)
Age in Years	50-54		1,936 (19)			297 (22)	
	55-59		2,665 (27)			352 (26)	
	60-64		2,163 (22)			319 (24)	
	65+		3,178 (32)	3,178 (100)		385 (28)	385 (100)

1 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

- While the overall number of new diagnoses has decreased since 2012, the number of people aged 50 years and older at the time of diagnosis has fluctuated and accounted for as many as 21% in 2019 and as few as 10% of new diagnoses in 2015.
- During the past decade, the proportion of new diagnoses per year among people 50 years and older has shifted higher during the recent 2019-2021 period, compared to previous years.

Figure 12.1 Number and percent of people newly diagnosed with HIV at age 50 years and older, 2012-2021, San Francisco



1 Includes people with HIV by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

- Between 2012 and 2021, a higher proportion of cis women, Whites, Black/African Americans, PWID, and heterosexuals were diagnosed at the age of 50 years and older compared to those who were younger at time of diagnosis.
- Similar trends were observed when comparing those diagnosed at the age of 65 years and older to those younger than 50 years old at time of diagnosis.
- In particular, the proportion of cis women among those newly diagnosed was lowest among those diagnosed under age 50 (7%) compared to 16% of those diagnosed at the age of 50 years and older and a high of 21% among those diagnosed at the age of 65 years and older.
- Of all people diagnosed at the age of 50 and older, 45% were 50-54 years old, 26% were 55-59 years old, 19% were 60-64 years old, and 10% were 65 years and older.

Table 12.3 Characteristics of people newly diagnosed with HIV in 2012-2021 by age at diagnosis, San Francisco

		Age < 50 years at diagnosis	Age ≥ 50 years at diagnosis	Age ≥ 65 years at diagnosis
		Number (%)		
	Total	**2,279**	**382**	**39**
Gender[1]	Cis Men	2,025 (89)	317 (83)	31 (79)
	Cis Women	154 (7)	60 (16)	8 (21)
	Trans Women	94 (4)	5 (1)	0 (0)
Race/Ethnicity	White	844 (37)	203 (53)	19 (49)
	Black/African American	311 (14)	60 (16)	7 (18)
	Latinx	734 (32)	63 (16)	7 (18)
	Asian/Pacific Islander	288 (13)	33 (9)	4 (10)
	Other/Unknown	102 (4)	23 (6)	2 (5)
Transmission Category	MSM	1,597 (70)	225 (59)	22 (56)
	PWID	145 (6)	58 (15)	4 (10)
	MSM-PWID	265 (12)	30 (8)	2 (5)
	Heterosexual	107 (5)	40 (10)	7 (18)
	Other/Unidentified[2]	165 (7)	29 (8)	4 (10)
Age in Years	50-54		170 (45)	
	55-59		101 (26)	
	60-64		72 (19)	
	65+		39 (10)	39 (100)

1 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
2 Includes TWSM, TWSM-PWID and people with no identified risk factor.

- Among the 382 people diagnosed at the age of 50 years and older between 2012 and 2021, 67% (N=255) were MSM or MSM-PWID.
- Among MSM, those newly diagnosed at the age of 50 years and older were 66% White and 13% Latinx compared to 39% and 32%, respectively, among those younger than 50 years old at time of diagnosis.
- Among those newly diagnosed between 2012 and 2021 who were not MSM, there was less contrast in the distribution of race/ethnicity by age at time of diagnosis compared to MSM.
- However, non-MSM diagnosed at the age of 50 years and older were more likely to be cis gender (96%) compared to those younger than 50 years old at time of diagnosis, of whom 23% were trans women.

Table 12.4 Characteristics of people newly diagnosed with HIV in 2012-2021 by MSM transmission category and age at diagnosis, San Francisco

		MSM		Non-MSM	
		Age < 50 years	Age ≥ 50 years	Age < 50 years	Age ≥ 50 years
		Number (%)			
	Total	**1,862**	**255**	**417**	**127**
Gender[1]	Cis Men	1,862 (100)	255 (100)	163 (39)	62 (49)
	Cis Women			154 (37)	60 (47)
	Trans Women			94 (23)	5 (4)
Race/Ethnicity	White	730 (39)	169 (66)	114 (27)	34 (27)
	Black/African American	197 (11)	21 (8)	114 (27)	39 (31)
	Latinx	605 (32)	32 (13)	129 (31)	31 (24)
	Asian/Pacific Islander	253 (14)	22 (9)	35 (8)	11 (9)
	Other/Unknown	77 (4)	11 (4)	25 (6)	12 (9)
Transmission Category	MSM	1,597 (86)	225 (88)		
	PWID			145 (35)	58 (46)
	MSM-PWID	265 (14)	30 (12)		
	Heterosexual			107 (26)	40 (31)
	Other/Unidentified[2]			165 (40)	29 (23)
Age in Years at Diagnosis	50-54		126 (49)		44 (35)
	55-59		61 (24)		40 (31)
	60-64		44 (17)		28 (22)
	65+		24 (9)		15 (12)

1 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."
2 Includes TWSM, TWSM-PWID and people with no identified risk factor.

13 HIV among Trans Women

4%
OF ALL NEW HIV DIAGNOSES FROM 2012-2021 WERE AMONG TRANS WOMEN

- From 2012 through 2021, there were 99 trans women newly diagnosed with HIV in San Francisco.
- Compared to people diagnosed with HIV in this time period who were not trans women, trans women were more likely to be Black/African American, Latinx, PWID, and younger.
- Twenty-two percent of newly diagnosed trans women were 13-24 years old compared with 13% of people who were not trans women; only 5% of diagnosed trans women were 50 years or older compared with 15% of people who were not trans women.

Table 13.1 Characteristics of trans women newly diagnosed with HIV in 2012-2021, San Francisco

		New HIV Diagnoses, 2012-2021	
		Trans Women[1]	Others
		Number (%)	
	Total	99	2,562
Race/Ethnicity	White	15 (15)	1,032 (40)
	Black/African American	28 (28)	343 (13)
	Latinx	40 (40)	757 (30)
	Asian/Pacific Islander	11 (11)	310 (12)
	Other/Unknown	5 (5)	120 (5)
People who Inject Drugs	Yes	26 (26)	496 (19)
	No	73 (74)	2,066 (81)
Age at Diagnosis (Years)	13 - 24	22 (22)	330 (13)
	25 - 29	16 (16)	492 (19)
	30 - 39	36 (36)	796 (31)
	40 - 49	20 (20)	567 (22)
	50+	5 (5)	377 (15)

1 See Technical Notes "Gender Status."

- Among the 421 trans women living with HIV in San Francisco as of December 31, 2021, Latinx and Black/African Americans accounted for the largest proportions, 36% and 30%, respectively.
- Forty percent of trans women living with HIV were PWID.
- Similar to trans women newly diagnosed with HIV in 2012-2021, there was a higher proportion of people of color, PWID, and younger ages among trans women living with HIV compared to other PLWH in San Francisco.
- Fifty-two percent of trans women living with HIV were under 50 years of age at the end of 2021, compared with 27% of other PLWH.

Table 13.2 Characteristics of trans women living with HIV, December 2021, San Francisco

		PLWH, December 2021	
		Trans Women[1]	Others
		Number (%)	
	Total	421	15,210
Race/Ethnicity	White	74 (18)	8,795 (58)
	Black/African American	127 (30)	1,692 (11)
	Latinx	152 (36)	3,146 (21)
	Asian/Pacific Islander	40 (10)	984 (6)
	Other/Unknown	28 (7)	593 (4)
People who Inject Drugs	Yes	167 (40)	2,893 (19)
	No	254 (60)	12,317 (81)
Age in Years (at end of 2021)	13 - 17	0 (0)	2 (<1)
	18 - 24	4 (1)	46 (<1)
	25 - 29	14 (3)	236 (2)
	30 - 39	85 (20)	1,448 (10)
	40 - 49	114 (27)	2,387 (16)
	50+	204 (48)	11,091 (73)

1 See Technical Notes "Gender Status."

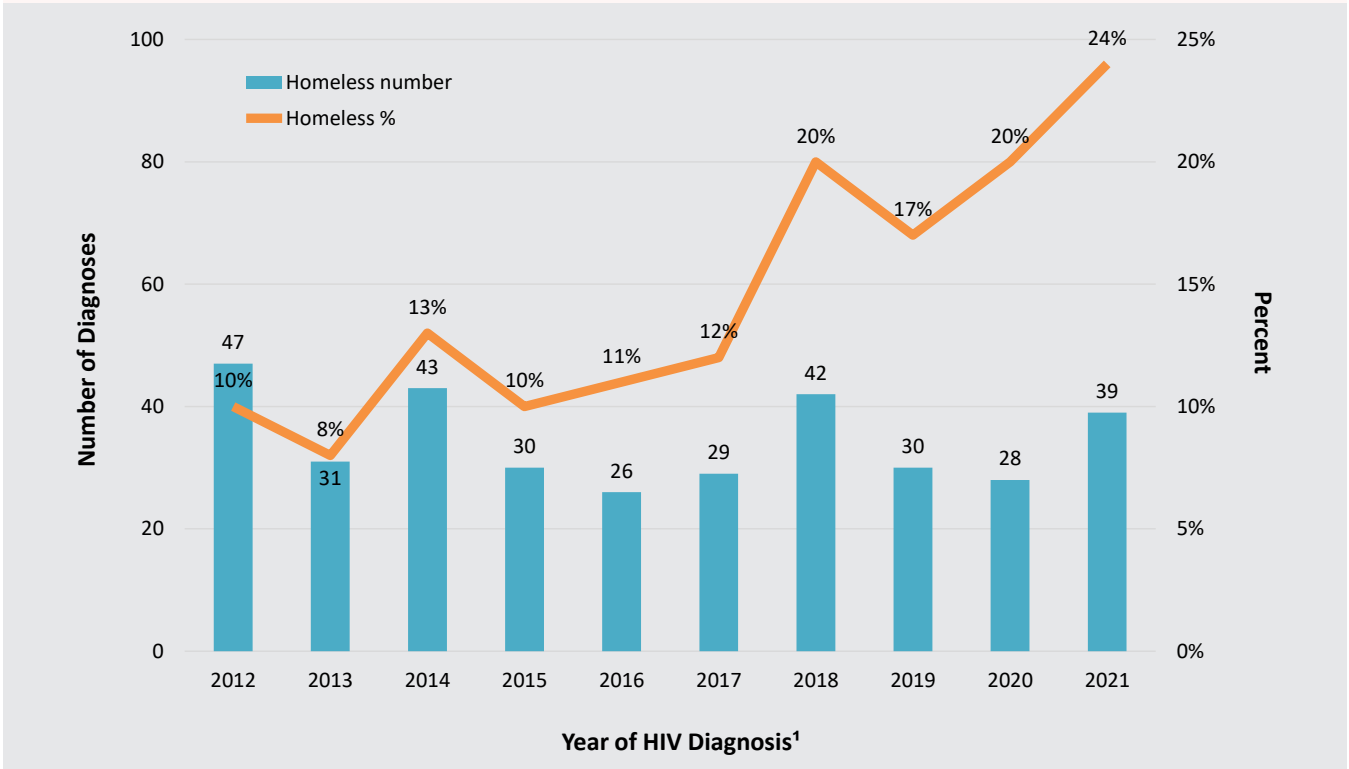
14 Housing Status among People Living with HIV

1 in 4

OF NEW DIAGNOSES IN 2021 WERE PEOPLE EXPERIENCING HOMELESSNESS

- The proportion of new diagnoses among people experiencing homelessness (PEH) (see Technical Notes "Housing Status") showed an overall increasing trend between 2012 and 2021.
- The proportion of new diagnoses who were PEH fluctuated between 8% and 13% during 2012-2017, rose to 20% in 2018, and 24% in 2021.

Figure 14.1 Number and percent of people experiencing homelessness newly diagnosed with HIV, 2012-2021, San Francisco



1 Includes people with HIV by year of their initial HIV diagnosis. See Technical Notes "Date of Initial HIV Diagnosis."

- Among people diagnosed from 2012 to 2021, 345 people were homeless at HIV diagnosis.
- Compared to people who were not homeless and diagnosed with HIV in the same time period, people who experienced homelessness at time of diagnosis were more likely to be cis women or trans women, Black/African Americans, trans women who have sex with men (TWSM), and people who inject drugs (PWID, including MSM-PWID and TWSM-PWID).
- PWID, including MSM-PWID, comprised 52% of homeless diagnoses during 2012 to 2021.
- Age distributions at HIV diagnosis were similar between homeless and non-homeless people.

Table 14.1 Characteristics of people newly diagnosed with HIV in 2012-2021 who were homeless compared to people who were not homeless, San Francisco

		New HIV Diagnoses, 2012-2021	
		Homeless	Non-Homeless
		Number (%)	
	Total	345	2,316
Gender[1]	Cis Men	271 (79)	2,071 (89)
	Cis Women	51 (15)	163 (7)
	Trans Women	23 (7)	76 (3)
Race/Ethnicity	White	133 (39)	914 (39)
	Black/African American	83 (24)	288 (12)
	Latinx	95 (28)	702 (30)
	Asian/Pacific Islander	10 (3)	311 (13)
	Other/Unknown	24 (7)	101 (4)
Transmission Category	MSM	108 (31)	1,714 (74)
	TWSM & TWSM-PWID	21 (6)	76 (3)
	PWID	94 (27)	109 (5)
	MSM-PWID	86 (25)	209 (9)
	Heterosexual	20 (6)	127 (5)
	Other/Unidentified	16 (5)	81 (3)
Age at Diagnosis (Years)	13 - 24	39 (11)	313 (14)
	25 - 29	64 (19)	444 (19)
	30 - 39	121 (35)	711 (31)
	40 - 49	74 (21)	513 (22)
	50+	47 (14)	335 (14)

1 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

- A total of 8,624 people living with HIV (PLWH) had residential housing status or address information in 2021. During 2021 we also classified people as living in a housing shelter if the residential address provided matched a COVID-19 pandemic shelter in San Francisco.
- Six percent of PLWH with housing status or address in 2021 were homeless, lived in a single-room occupancy (SRO) facility, or lived in another type of housing shelter during 2021.
- Among people who were homeless or lived in a SRO facility/shelter during 2021, there were higher proportions of cis women, trans women, Black/African Americans, Latinx, PWID (including MSM-PWID and TWSM-PWID), and people in younger age groups (25-29 years, 30-39 years, 40-49 years), compared to PLWH who were not homeless and did not live in a SRO facility/shelter.
- Black/African Americans and Latinx people together made up 49% of people who were homeless or lived in SRO/shelter compared with 31% of people who were not homeless/lived in SRO/shelter in 2021.
- PWID accounted for 49% of people who were homeless or lived in SRO/shelter compared with 19% among people who were not homeless/lived in SRO/shelter.

Table 14.2 Characteristics of people living with HIV who were homeless or lived in an SRO facility during 2021 compared to people who were not homeless and did not live in an SRO facility, San Francisco

		PLWH as of 12/31/2021[1]	
		Ever homeless or SRO in 2021	Non-homeless/non-SRO in 2021
		Number (%)	
	Total	**555**	**8,069**
Gender[2]	Cis Men	418 (75)	7,401 (92)
	Cis Women	76 (14)	472 (6)
	Transgender	61 (11)	196 (2)
Race/Ethnicity	White	217 (39)	4,708 (58)
	Black/African American	147 (26)	877 (11)
	Latinx	128 (23)	1,627 (20)
	Asian/Pacific Islander	22 (4)	533 (7)
	Other	41 (7)	324 (4)
Transmission category	MSM	207 (37)	6,041 (75)
	TWSM	33 (6)	125 (2)
	PWID	99 (18)	368 (5)
	MSM-PWID	142 (26)	1,036 (13)
	TWSM-PWID	26 (5)	60 (1)
	Heterosexual	34 (6)	304 (4)
	Other/Unidentified	14 (3)	135 (2)
Age in years (as of 12/31/2021)	13-24	4 (<1)	31 (<1)
	25-29	23 (4)	132 (2)
	30-39	99 (18)	795 (10)
	40-49	110 (20)	1,300 (16)
	50-59	160 (29)	2,750 (34)
	60-69	117 (21)	2,248 (28)
	70+	42 (8)	813 (10)

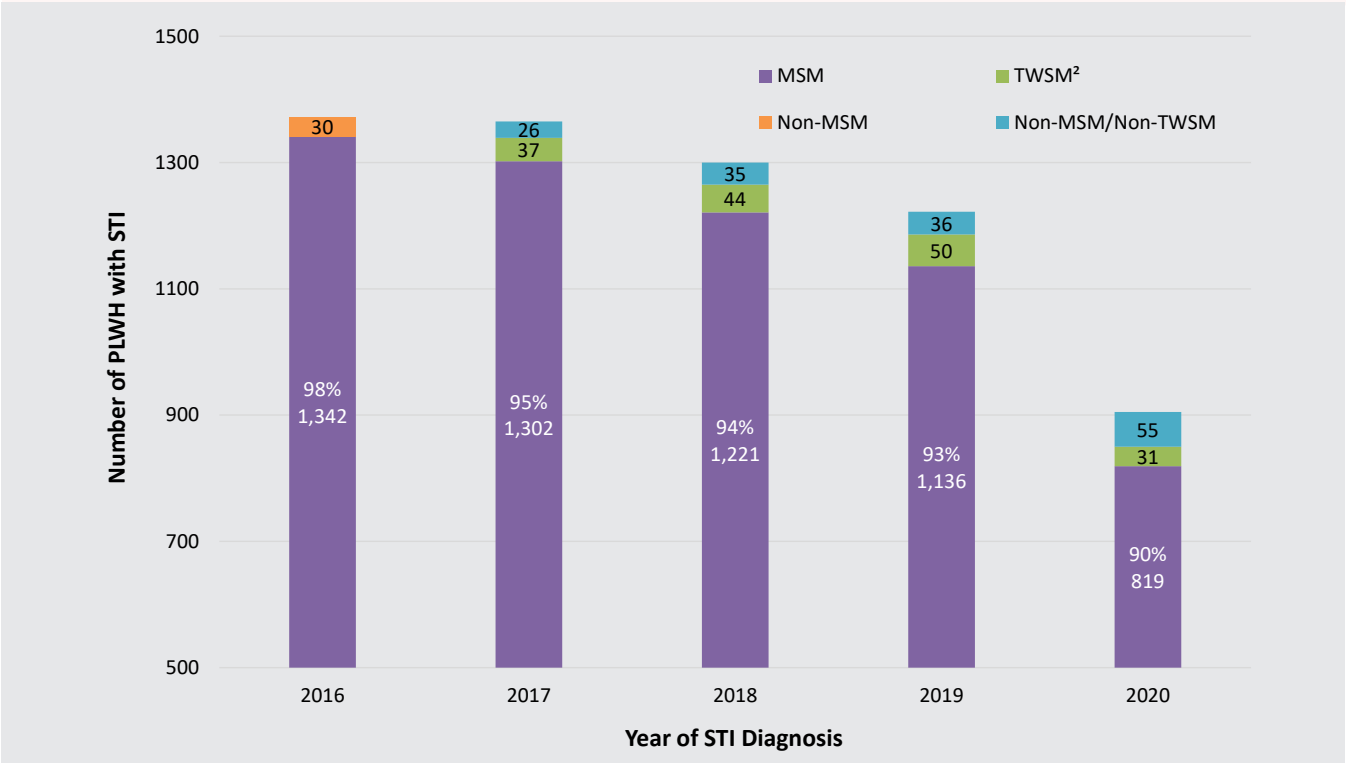
1 PLWH as of 12/31/2021 diagnosed in San Francisco at any HIV stage with residential housing status or address information in 2021.
2 Trans men and trans women not displayed separately due to small cell sizes and small denominators.

15 People Diagnosed with HIV and Sexually Transmitted Infections

≥90%
OF STI DIAGNOSES AMONG PLWH WERE AMONG MSM FROM 2016-2020

- The number of sexually transmitted infection (STI) diagnoses among people living with HIV (PLWH) steadily declined from 1,372 in 2016 to 1,222 in 2019, and then markedly declined to 905 in 2020.
- The majority of STI diagnoses (≥90%) were among men who have sex with men (MSM). The proportion of STI diagnoses who were MSM declined from 98% in 2016 to 90% in 2020.
- Since reporting TWSM as a separate category in 2017, the proportion of STI diagnoses among TWSM has increased from 2.7% in 2017 to 4.1% in 2019, and then decreased to 3.4% in 2020.
- During 2016-2020, the temporal trend in STI diagnoses roughly mirrors the trend shown for early syphilis (Figure 7.4 on page 59) and for male gonorrhea (Figure 7.3 on page 58) among MSM diagnosed with HIV.

Figure 15.1 STI diagnoses[1] among people living with HIV by year of STI diagnosis, 2016-2020, San Francisco



1 See Technical Notes "HIV and STI Diagnosis."
2 TWSM were included in MSM transmission category in 2016 and are shown separately beginning in 2017.

- The majority of PLWH diagnosed with an STI from 2016 through 2020 were cis men and aged 40-59 years at time of STI diagnosis. Whites made up the majority in 2016 and 2017 and then gradually declined, to 44% in 2020.
- The proportion of PLWH diagnosed with an STI at age 50 or older increased from 33% in 2016 to 41% in 2020, while the proportion of those aged 13-29 and 40-49 declined during the same time period.

Table 15.1 Demographic characteristics of people living with HIV who were diagnosed with an STI[1], 2016-2020, San Francisco

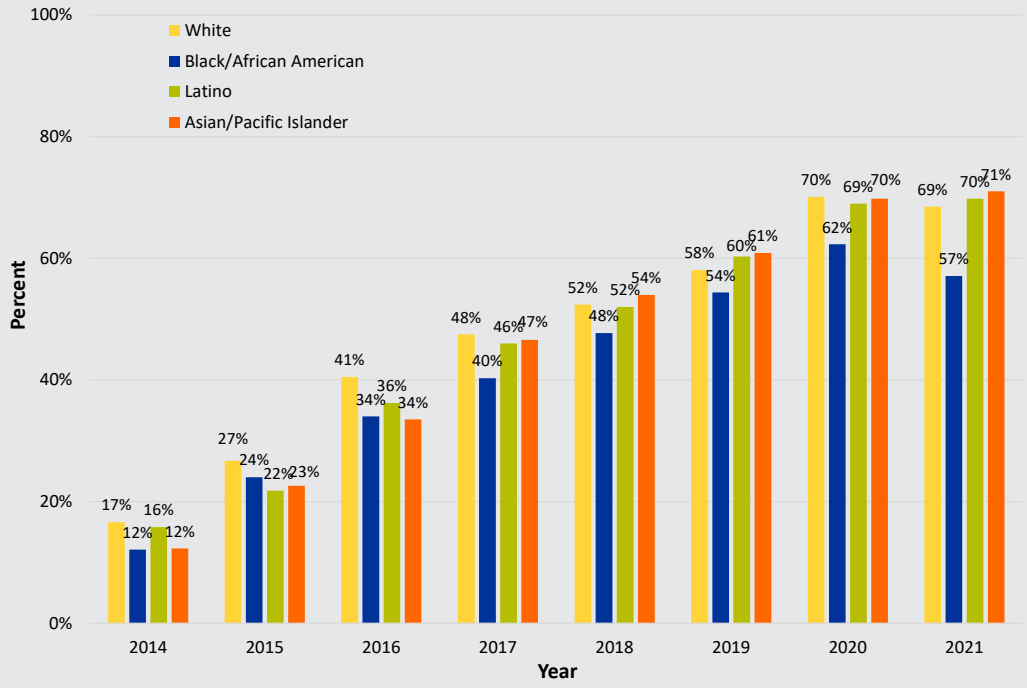
		Year of STI diagnosis				
		2016	2017	2018	2019	2020
		Number (%)				
	Total	1,372	1,365	1,300	1,222	905
Gender[2]	Cis Men	1,312 (96)	1,311 (96)	1,232 (95)	1,154 (94)	837 (92)
	Cis Women	14 (1)	16 (1)	23 (2)	18 (1)	20 (2)
	Trans Women	46 (3)	37 (3)	44 (3)	50 (4)	46 (5)
Race/Ethnicity	White	728 (53)	715 (52)	647 (50)	591 (48)	401 (44)
	African American	119 (9)	114 (8)	125 (10)	101 (8)	89 (10)
	Latinx	366 (27)	366 (27)	345 (27)	369 (30)	284 (31)
	Asian/Pacific Islander	107 (8)	112 (8)	119 (9)	109 (9)	89 (10)
	Other/Unknown	52 (4)	58 (4)	64 (5)	52 (4)	42 (5)
Age at STD Diagnosis (years)	13 - 29	166 (12)	135 (10)	121 (9)	90 (7)	62 (7)
	30 - 39	312 (23)	326 (24)	306 (24)	305 (25)	237 (26)
	40 - 49	440 (32)	433 (32)	359 (28)	335 (27)	236 (26)
	50 - 59	361 (26)	356 (26)	373 (29)	359 (29)	268 (30)
	60 +	93 (7)	115 (8)	141 (11)	133 (11)	102 (11)

1 See Technical Notes "HIV and STI Diagnosis."
2 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

16 Pre-Exposure Prophylaxis

- Among San Francisco City Clinic (SFCC) patients seen in 2014 to 2021, pre-exposure prophylaxis (PrEP) use among HIV-negative men who have sex with men (MSM) increased each year for all races from 2014 to 2020.
- By racial/ethnic groups, 12%-17% of HIV-negative MSM were on PrEP in 2014 compared to 57%-71% of HIV-negative MSM in 2021.
- From 2020 to 2021, PrEP use was fairly level among White, Latino, and Asian/Pacific Islander MSM; PrEP use declined among Black/African American MSM from 62% in 2020 to 57% in 2021.
- In recent years (2017 to 2021), Black/African American MSM had lower proportions of PrEP use compared to MSM of other racial/ethnic groups, with 57% of Black/African American MSM on PrEP in 2021 compared to 69-71% for White, Latino and Asian/Pacific Islander MSM.
- The increase in the proportion of MSM at SFCC who are currently on PrEP in 2020 may partially be explained by selection bias. Due to the COVID-19 pandemic, the capacity to see patients at SFCC was limited and PrEP patients were prioritized for appointments.

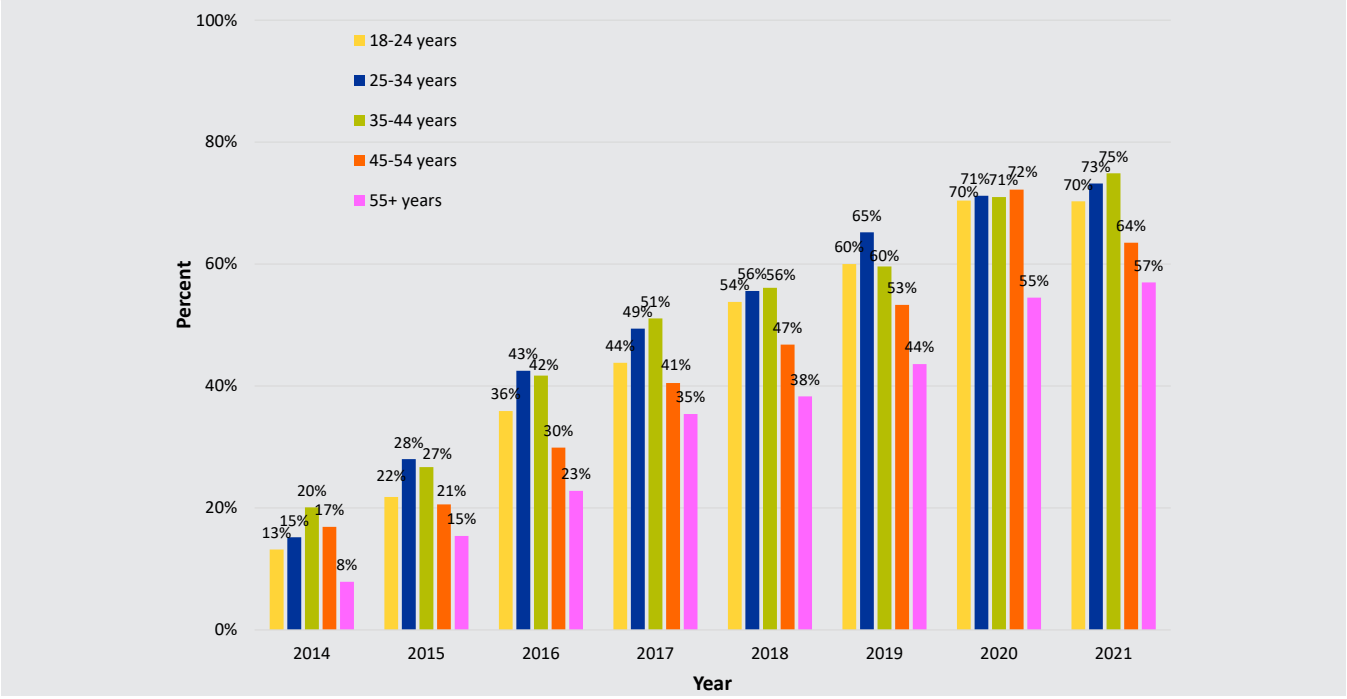
Figure 16.1 Proportion of MSM currently on PrEP[1] by race/ethnicity, San Francisco City Clinic patients, 2014-2021



1 On PrEP at visit: (1) Answer 'yes' to are you currently on PrEP or (2) Enrolled in PrEP as of visit.

- From 2014 to 2020, PrEP use increased among MSM in every age group.
- From 2020 to 2021, PrEP use was level for MSM 18-24 years of age (70%); PrEP use increased in MSM aged 25-34 years, 35-44 years, and 55 years and older.
- PrEP use declined among MSM age 45-54 years from 2020 to 2021 (72% to 64%).
- Overall, PrEP use was lowest each year among MSM 55 years and older, compared to other age groups.

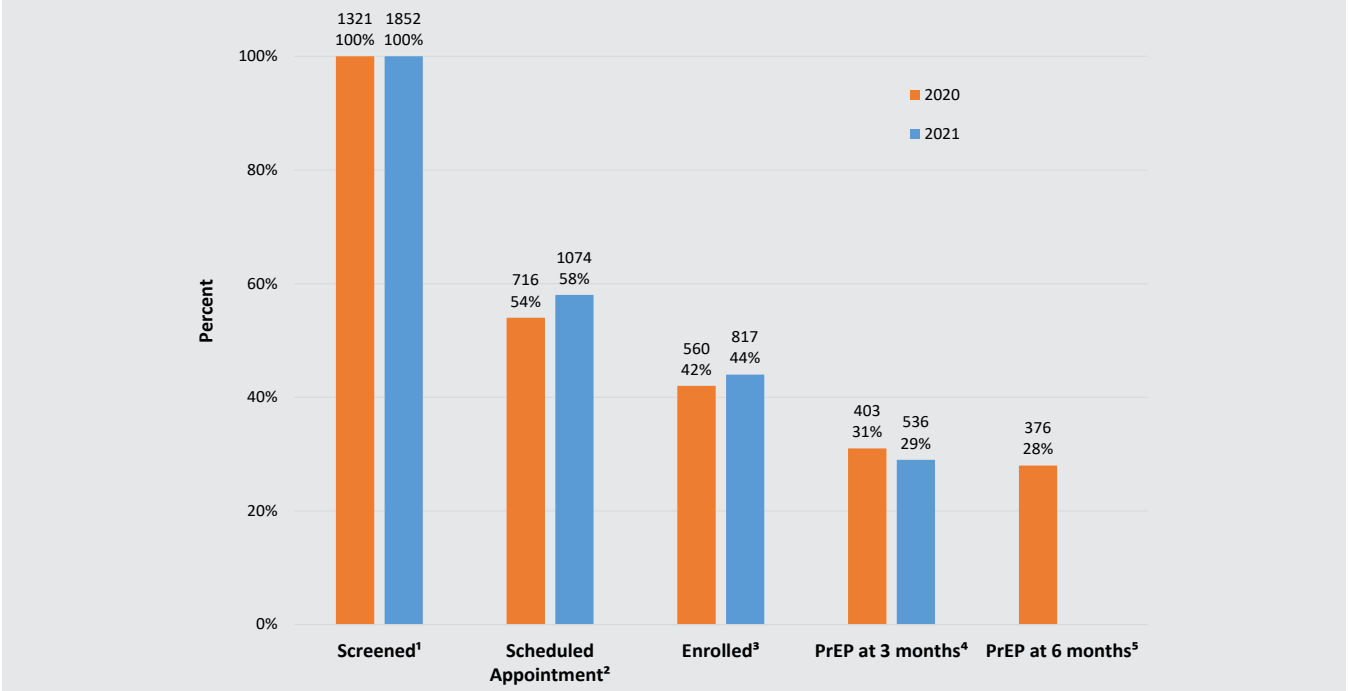
Figure 16.2 Proportion of MSM currently on PrEP[1] by age, San Francisco City Clinic patients, 2014-2021



1 On PrEP at visit: (1) Answer 'yes' to are you currently on PrEP or (2) Enrolled in PrEP as of visit.

- In 2020 there were 1,321 clients screened for PrEP at the San Francisco AIDS Foundation (SFAF), and in 2021 the number of clients screened for PrEP increased to 1,852.
- Both the number (1,074) and percent (58%) of clients who scheduled an appointment for PrEP in 2021 was higher compared to clients scheduling for PrEP in 2020 (716 clients scheduled, 54%).
- The proportion of clients enrolling in PrEP services among all individuals screened was similar for 2020 and 2021 (42% and 44%, respectively).
- In 2020, of those screened for PrEP, 31% were still in the SFAF PrEP program three months after enrollment.
- In 2021, a similar percentage of those screened for PrEP were still in the PrEP program at three months after enrollment (29%).
- Clients enrolled in 2020 reached six months of follow-up and 28% were observed to still participate in the PrEP program at six months after enrollment.

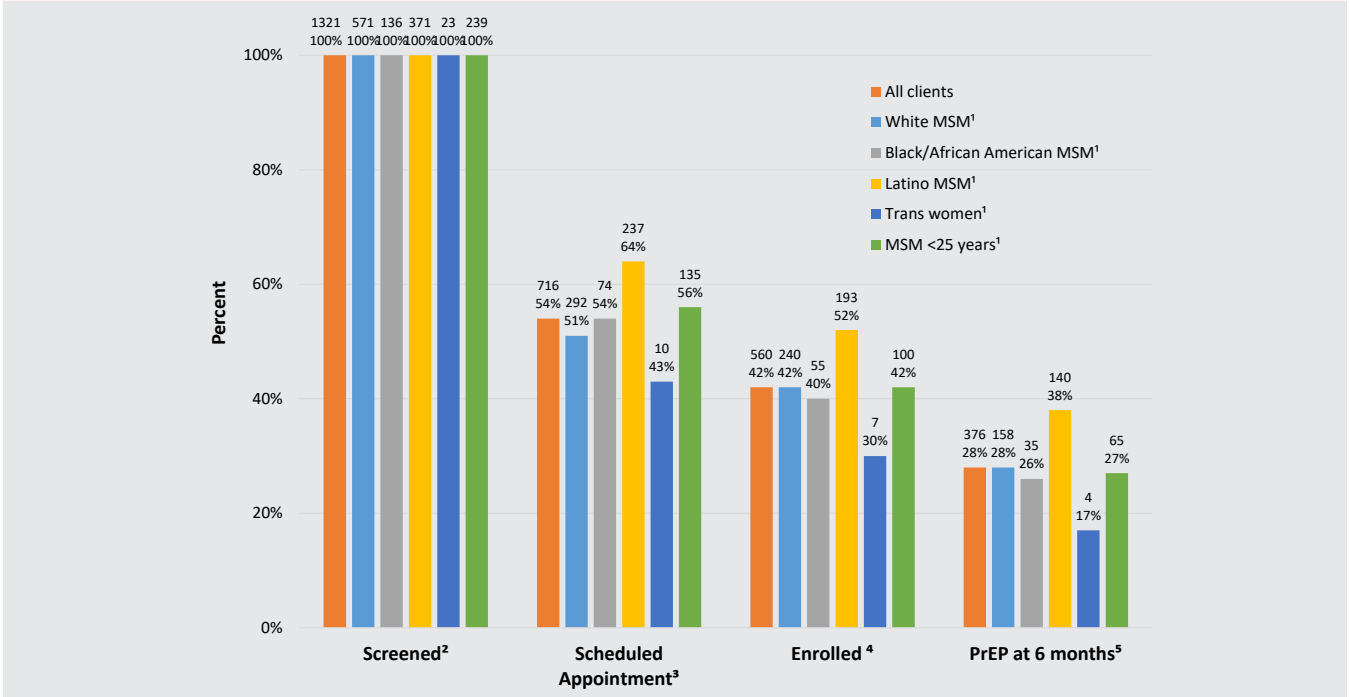
Figure 16.3 PrEP screening, appointments, enrollment, and PrEP at three and six months among clients being served by the San Francisco AIDS Foundation, 2020-2021



1 PrEP screening was defined as all people who were seen for sexual health care at the SFAF, were HIV-negative, and did not report current PrEP use on screening date.
2 Scheduled appointment for PrEP was defined as scheduling an appointment for PrEP enrollment.
3 Enrolled in PrEP was defined as attending a PrEP enrollment visit and having a PrEP prescription.
4 PrEP at three months was defined as still being enrolled in the SFAF PrEP program at three month follow-up.
5 PrEP at six months was defined as still being enrolled in the SFAF PrEP program at six month follow-up. Data on PrEP at six months are incomplete because not all PrEP enrollees in 2021 had completed six months of follow-up after enrollment.

- Of the 1,321 clients screened for PrEP in 2020, Latino MSM were most likely to schedule an appointment (64%) as were MSM under 25 years of age (56%).
- Over half of the Latino MSM screened enrolled in PrEP (52%); enrollment was lowest among trans women (30%).
- PrEP at six months was highest for Latino MSM (38%) and lowest for trans women (17%).

Figure 16.4 PrEP screening, appointments, enrollment, and PrEP at six months by priority populations among clients being served by the San Francisco AIDS Foundation, 2020



1 These groups are priority populations and not mutually exclusive.
2 PrEP screening was defined as all people who were seen for sexual health care at the SFAF, were HIV-negative, and did not report current PrEP use on screening date.
3 Scheduled appointment for PrEP was defined as scheduling an appointment for PrEP enrollment.
4 Enrolled in PrEP was defined as attending a PrEP enrollment visit and having a PrEP prescription.
5 PrEP at six months was defined as still being enrolled in the SFAF PrEP program at six month follow-up.

- Of the priority population clients enrolled in PrEP at the SFAF in 2020, clients were prescribed one of two PrEP regimens (See Technical Notes "HIV Pre-exposure Prophylaxis Regimens"): daily PrEP which consists of taking PrEP medication once per day or PrEP 2-1-1 which involves taking PrEP medication around times of sex instead of once per day.
- Enrollment among priority populations in these PrEP regimens was evaluated, as well as still being on the PrEP regimen at 6 months after enrollment.
- Overall, among all clients enrolled in PrEP in 2020, 81% were enrolled to use daily PrEP, while 19% were enrolled to use PrEP 2-1-1.
- The priority group with the highest proportion of enrolled clients using PrEP 2-1-1 was Black/African American MSM (22%).
- Among all clients enrolled in either PrEP regimen in 2020, 67% on daily PrEP and 67% on PrEP 2-1-1 were still enrolled in the same regimen 6 months after enrollment.
- For Black/African American MSM, Latino MSM, and MSM <25 years old, the percentage staying on PrEP at 6 months was higher for those using PrEP 2-1-1 than daily PrEP.

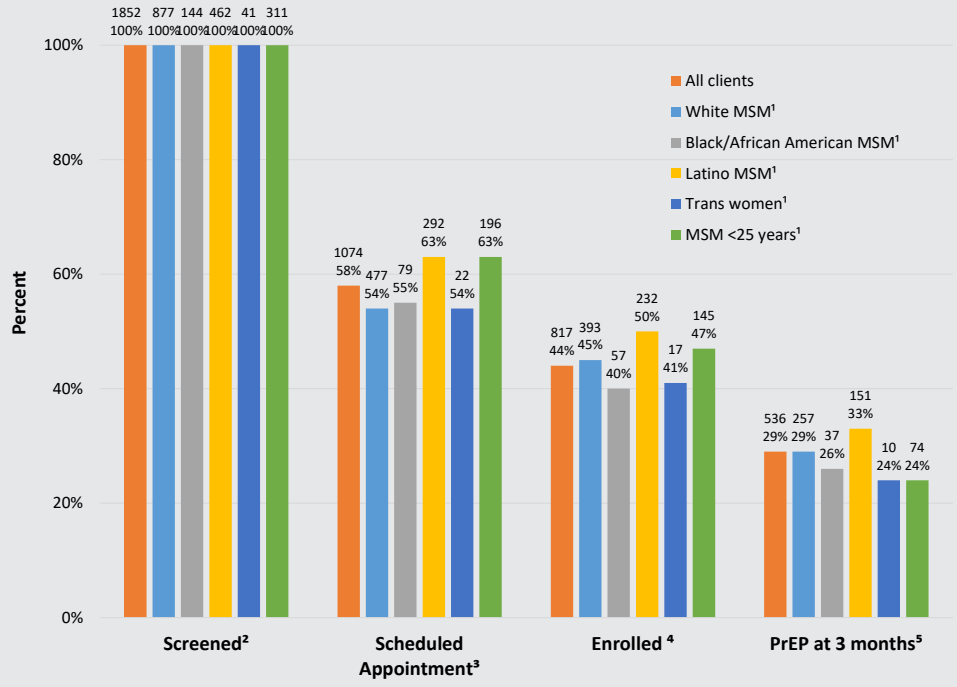
Table 16.1 PrEP enrollment and PrEP at six months by priority population clients and PrEP regimen, San Francisco AIDS Foundation, 2020

		Enrolled[1]		PrEP at Six Months[2]	
		Number (Column %)		Number (row % of Enrolled PrEP Regimen)	
	All Clients	**560**		**376**	
	Daily PrEP	456	(81)	306	(67)
	PrEP 2-1-1	104	(19)	70	(67)
Priority Populations[3]/ PrEP Regimens	**White MSM**	**240**		**158**	
	Daily PrEP	193	(80)	127	(66)
	PrEP 2-1-1	47	(20)	31	(66)
	Black/African American MSM	**55**		**35**	
	Daily PrEP	43	(78)	27	(63)
	PrEP 2-1-1	12	(22)	8	(67)
	Latino MSM	**193**		**140**	
	Daily PrEP	161	(83)	113	(70)
	PrEP 2-1-1	32	(17)	27	(84)
	MSM <25 years	**100**		**65**	
	Daily PrEP	83	(83)	53	(64)
	PrEP 2-1-1	17	(17)	12	(71)

1 Enrolled in PrEP was defined as attending a PrEP enrollment visit and having a PrEP prescription.
2 PrEP at six months was defined as still being enrolled in the SFAF PrEP program at six month follow-up.
3 These groups are priority populations and not mutually exclusive. Data on trans women are not displayed due to small numbers.

- Of the 1,852 clients screened for PrEP in 2021, Latino MSM and MSM under 25 years of age were the most likely to schedule an appointment (63%).
- PrEP enrollment was highest among Latino MSM (50%) and lowest for Black/African Americans (40%) and trans women (41%).
- PrEP enrollees in 2021 had completed three months of follow-up after enrollment.
- PrEP at three months was highest for Latino MSM (33%).
- PrEP at three months was lowest for trans women and MSM under 25 years of age; 24% of both these priority group enrollees were on PrEP at three months.

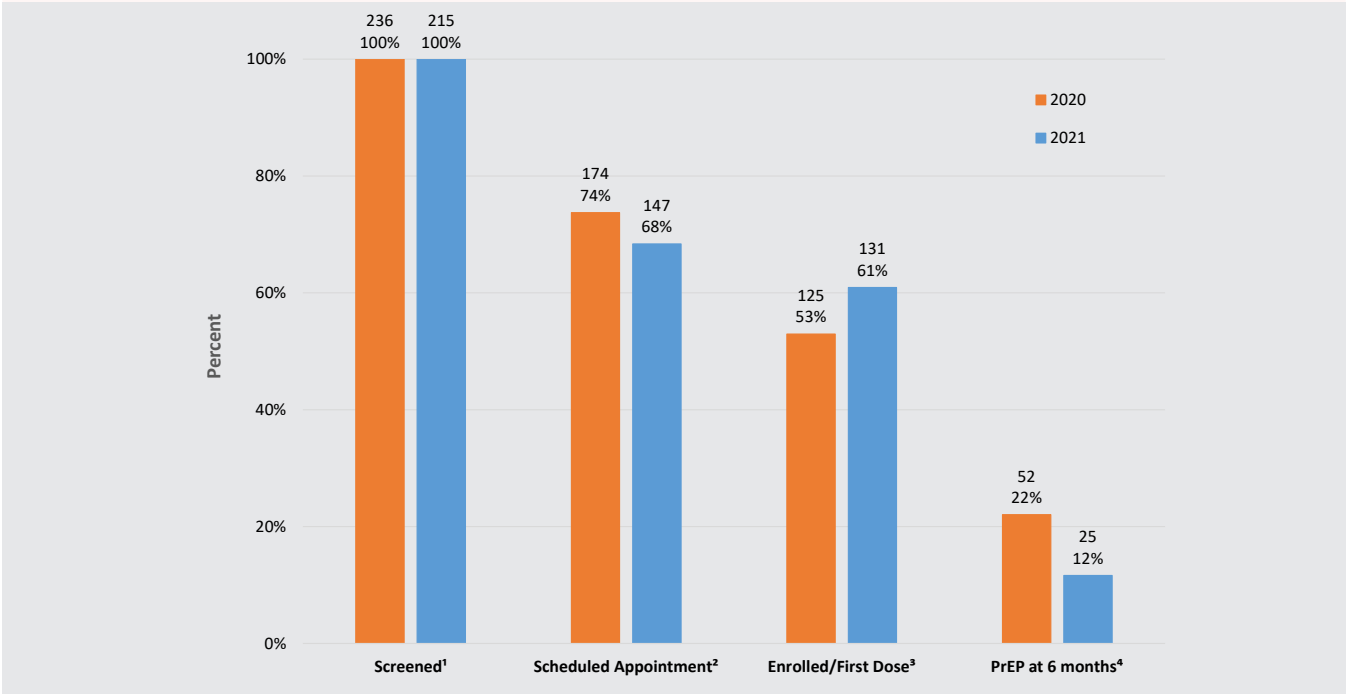
Figure 16.5 PrEP screening, appointments, enrollment and PrEP at six months by priority populations among clients being served by the San Francisco AIDS Foundation, 2021



1 These groups are priority populations and not mutually exclusive.
2 PrEP screening was defined as all people who were seen for sexual health care at the SFAF, were HIV-negative, and did not report current PrEP use on screening date.
3 Scheduled appointment for PrEP was defined as scheduling an appointment for PrEP enrollment.
4 Enrolled in PrEP was defined as attending a PrEP enrollment visit and having a PrEP prescription.
5 PrEP at three months was defined as still being enrolled in the SFAF PrEP program at three month follow-up.

- In 2020, 236 clients were screened for PrEP across five select community-based organizations (CBOs), including: Lavender Youth Recreation and Information Center (LYRIC), Alliance Health Project (AHP), Mission Wellness Pharmacy (MWP), Instituto Familiar de la Raza (IFR), and Asian and Pacific Islander Wellness Center (API, now called San Francisco Community Health Center). In 2021, 215 clients were screened across these CBOs.
- Among those screened, the proportion of clients who scheduled an appointment for a PrEP visit was lower in 2021 (68%) compared to 2020 (74%). However, the proportion who enrolled in PrEP services and received a first dose of PrEP was higher in 2021 (61%) compared to 2020 (53%).
- In 2020, of those screened for PrEP, 52 (22%) were still on PrEP six months after starting their first dose. The most common reasons for not being on PrEP at six months included: moved out of San Francisco (19%), insurance change/transferred to a primary care provider (PCP)(10%), risk change (7%), and 64% had unknown reasons or were lost to follow-up.
- In 2021, of those screened for PrEP, 25 (12%) were still on PrEP six months after starting their first dose. The most common reasons for not being on PrEP at six months included: moved out of San Francisco (4%), risk change (2%), transferred to a PCP (1%), and 93% had unknown reasons or were lost to follow-up.

Figure 16.6 PrEP screening, appointments, enrollment, and PrEP at six months among clients being served by select San Francisco community based organizations, 2020-2021

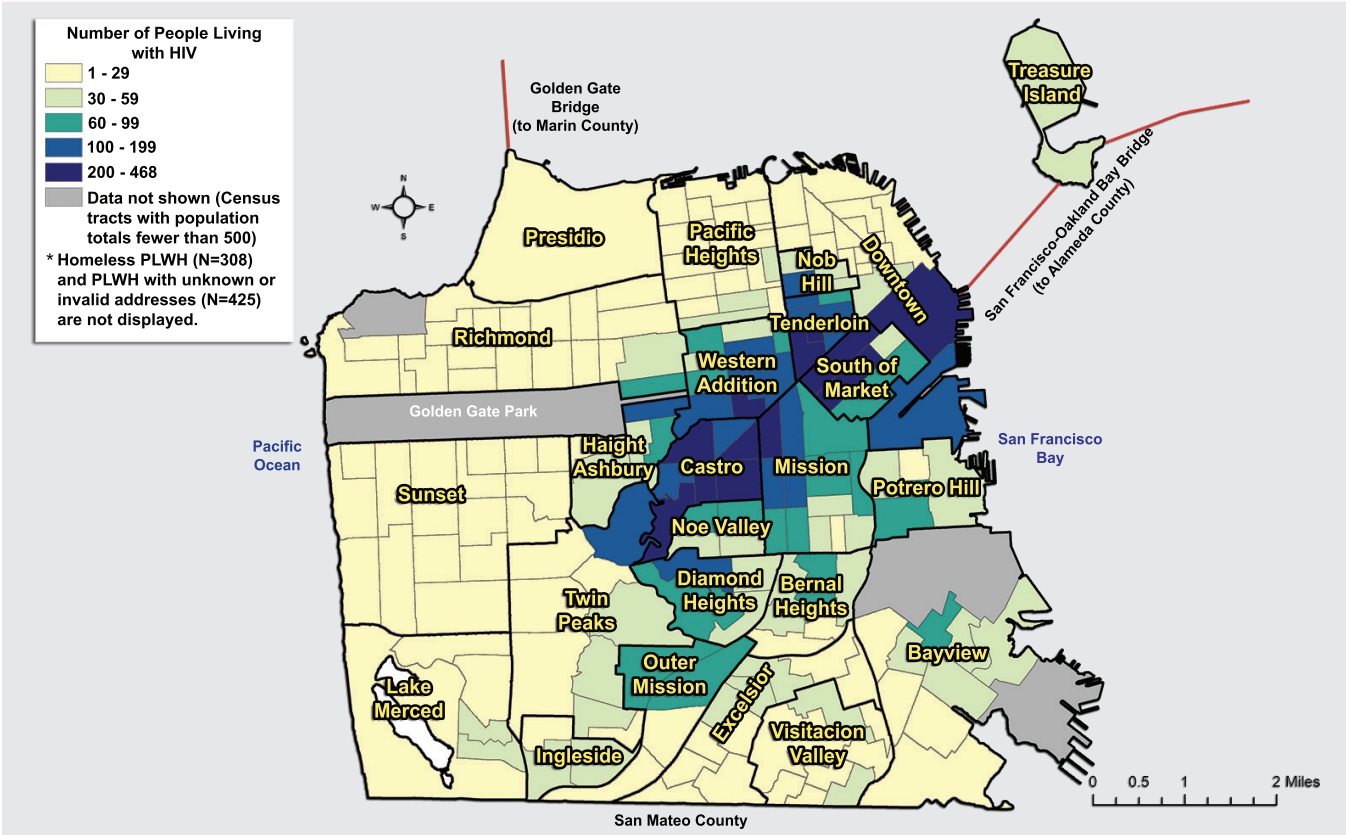


1 PrEP screening was defined as all people who were seen for sexual health care at five select community-based organizations (CBOs) and were HIV-negative and did not report current PrEP use on screening date.
2 Scheduled appointment for PrEP was defined as scheduling a medical appointment to start PrEP.
3 Enrolled in PrEP/first dose was defined as the client initiated PrEP and took first dose.
4 PrEP at six months was defined as client reporting they were still on PrEP (4 or more doses in prior week) at six month follow-up.

17 Geographic Distribution of People with HIV

- There were 11,830 current San Francisco residents living with HIV as of December 31, 2021, regardless of their residence at HIV diagnosis. By neighborhood, the Castro had the highest number of people living with HIV (PLWH) (N=1,704) followed by the Tenderloin (N=1,505) and the Western Addition (N=1,203).
- Among PLWH currently residing in San Francisco, 2,946 (25%) were diagnosed in another jurisdiction. Forty-three percent of PLWH who resided in San Francisco at time of diagnosis have since moved out of the city (Table 1.4 on page 7).
- The Castro, Downtown, Mission, South of Market, Tenderloin, and Western Addition neighborhoods included census tracts with the highest numbers of PLWH (shown in the darkest shade of blue). The South of Market census tract along Market Street had the largest number of PLWH (N=468) followed by three census tracts in the Castro. The Tenderloin census tracts are smaller in geographic area but have similarly high numbers of PLWH, a reminder of the high density of PLWH by geographic area in this neighborhood.

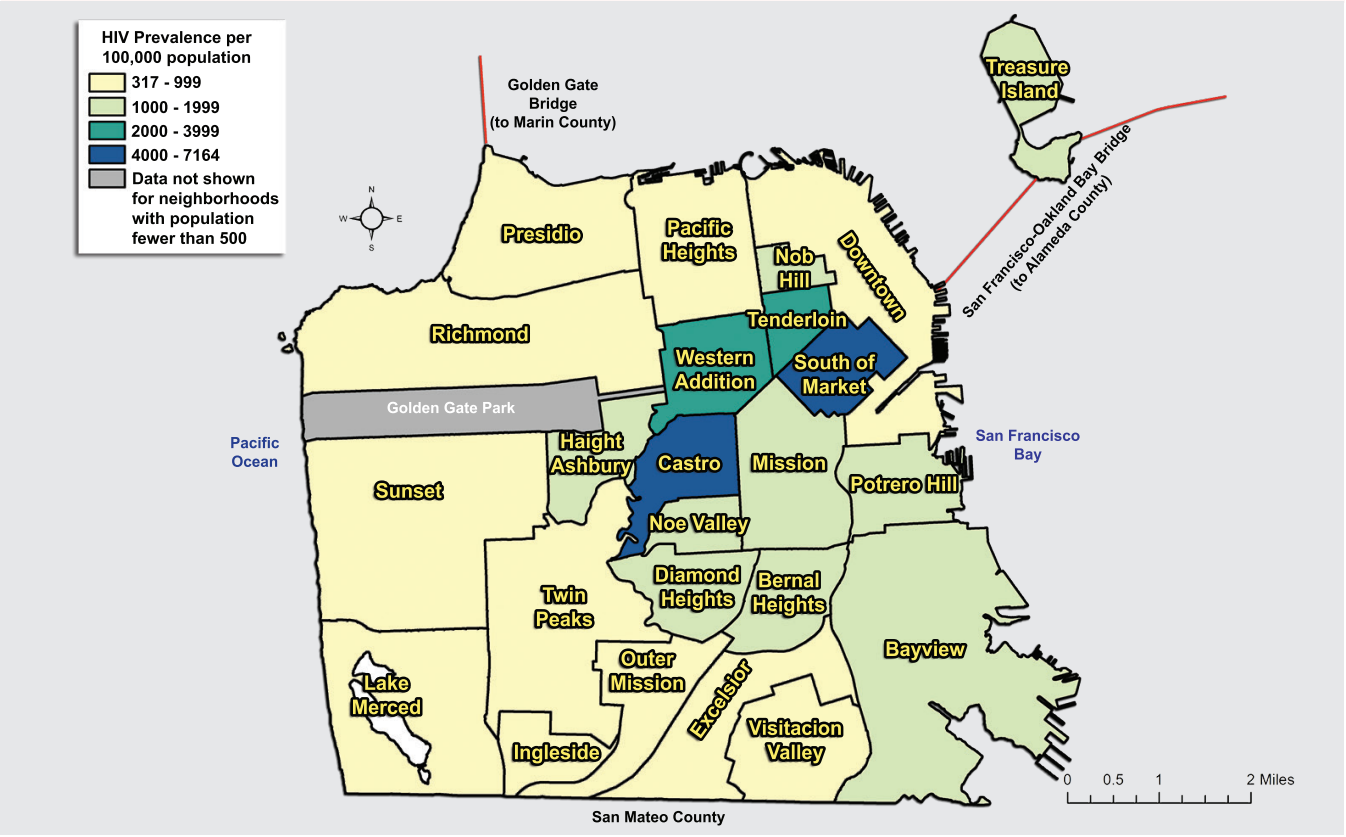
Map 17.1 Geographic distribution[1] of people living with HIV who resided in San Francisco as of December 2021



1 The most recently reported address for PLWH as of December 31, 2021 was geocoded and displayed at census tract and neighborhood level on the map. Addresses are obtained through chart review, laboratory reports, and communications with other jurisdictions.

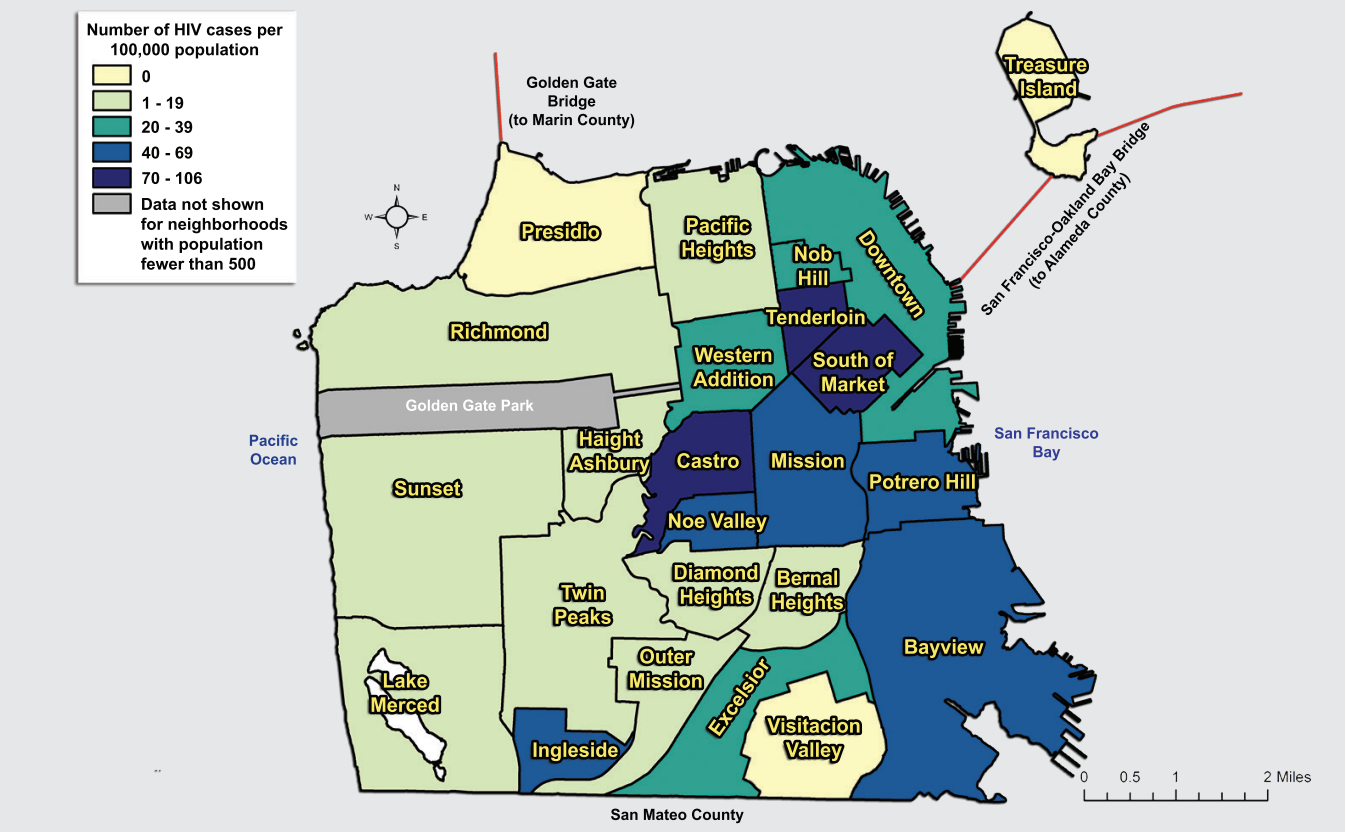
- The Castro had the highest HIV prevalence (7,164 PLWH per 100,000), followed by South of Market (4,052 per 100,000), the Tenderloin (3,836 per 100,000), and the Western Addition (2,971 per 100,000).

Map 17.2 HIV prevalence per 100,000 population by neighborhood, 2021, San Francisco



- South of Market had the highest cumulative rate of new diagnoses[1] in 2020-2021 (106 per 100,000), followed by the Tenderloin (99 per 100,000) and the Castro (84 per 100,000).
- No new diagnoses were in the Presidio, Treasure Island, or Visitacion Valley in 2020-2021.

Map 17.3 Rates of HIV diagnosis per 100,000 population for people newly diagnosed in 2020-2021 by neighborhood, San Francisco

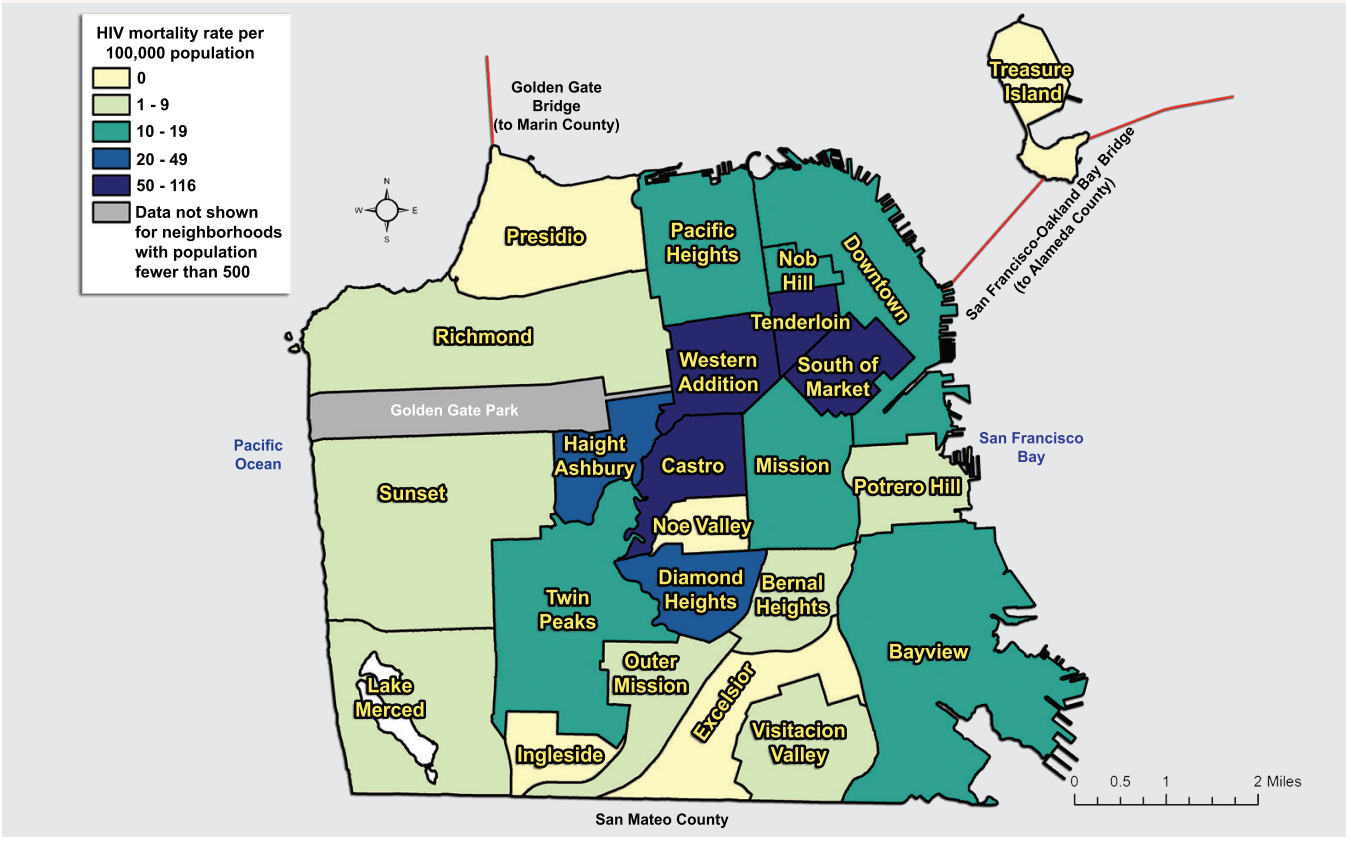


1 Residence at time of diagnosis is used for this map.

1 Two-year diagnosis rate numerators represent two years of new diagnoses.

- Among people with HIV, South of Market had the highest mortality rate in 2021 (116 deaths per 100,000), followed by the Tenderloin (102 deaths per 100,000), the Castro (88 deaths per 100,000), and the Western Addition (54 deaths per 100,000).
- Although HIV prevalence in the Castro was nearly twice as high as in the neighborhoods with the next highest HIV prevalence rates (Map 17.2 on page 89), South of Market and the Tenderloin both had HIV mortality rates exceeding 100 deaths per 100,000, which far surpassed the Castro's HIV mortality rate of 88 deaths per 100,000.
- Excelsior, Ingleside, Noe Valley, the Presidio, and Treasure Island had no deaths reported in 2021.

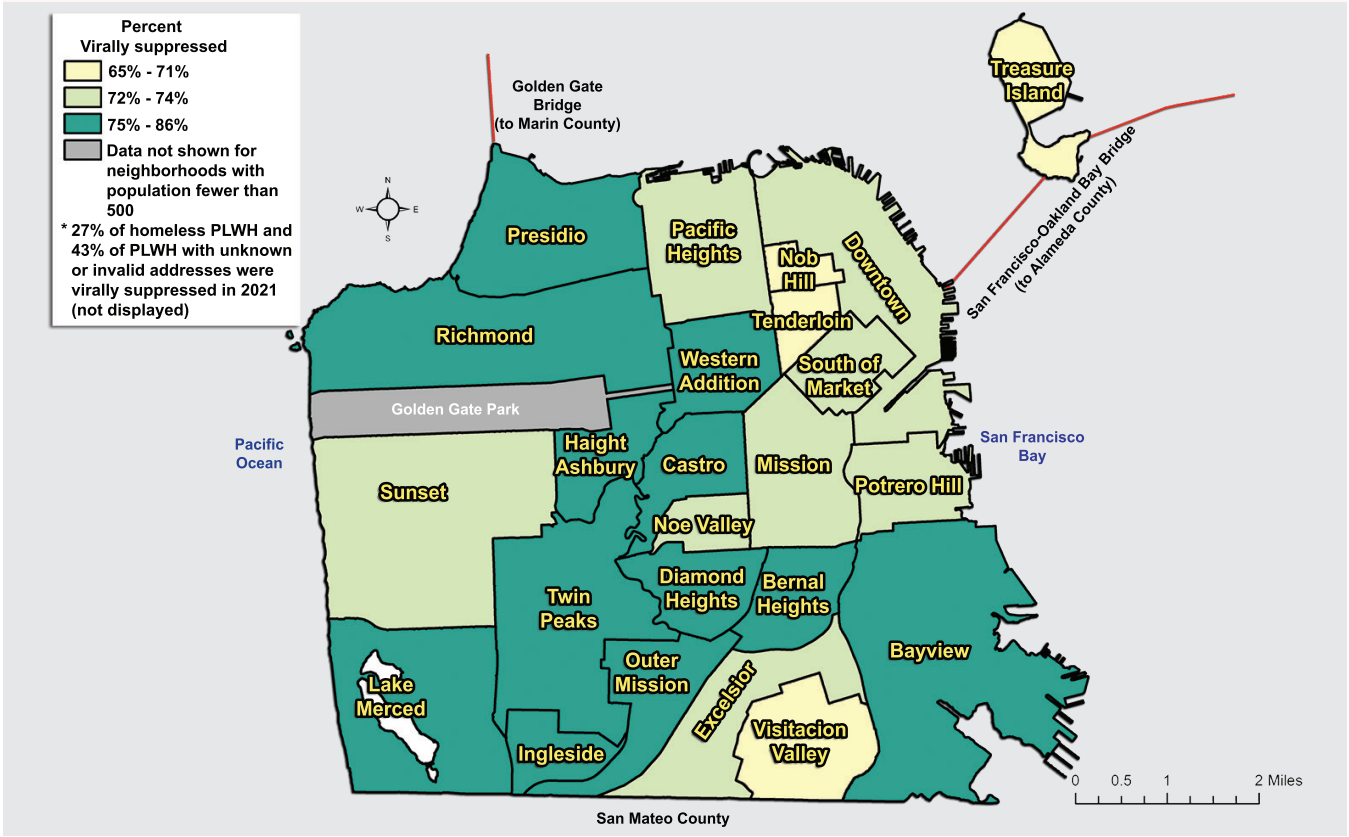
Map 17.4 Mortality rates among people with HIV per 100,000 population by neighborhood[1], 2021, San Francisco



1 The usual residence reported on the death certificate is used for this map.

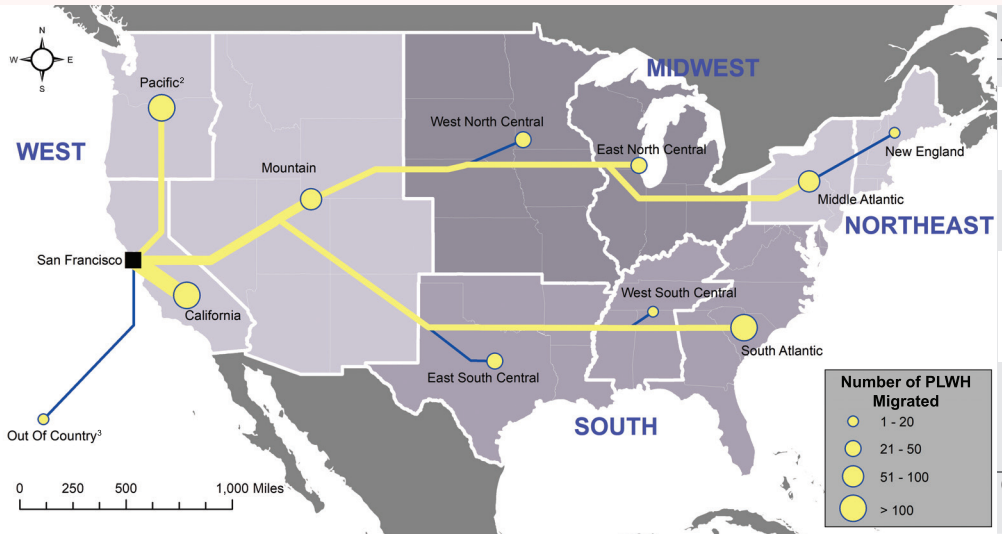
- Overall, 72% of PLWH in San Francisco who were diagnosed through December 2020 were virally suppressed as of December 2021.
- Only four neighborhoods had a viral suppression prevalence below the city-wide level: Treasure Island (65%), Visitacion Valley (66%), the Tenderloin (67%), and Nob Hill (68%).
- At 27% virally suppressed, homeless PLWH had a much lower prevalence of viral suppression compared to PLWH residing in any neighborhood.

Map 17.5 Geographic distribution of proportion of people living with HIV as of December 2021 and diagnosed through 2020 who were virally suppressed in 2021, San Francisco



- A total 1,373 San Francisco residents living with HIV moved out of the city between January 1, 2020 and December 31, 2021 (See Technical Notes "Migration of PLWH").
- The majority of out-migrating PLWH (61%) moved to other counties within the state of California during this period.
- Among the US Census Bureau-defined regional divisions, the other most common migration destinations were the South Atlantic (8%), the Pacific (8%), and the Middle Atlantic (7%).

Map 17.6 Geographic distribution of people living with HIV who resided in San Francisco as of December 2019 and moved away between January 2020 and December 2021



	Number	%
Total	**1,373**	
US Region/Division[1]		
Midwest		
East North Central	30	2%
West North Central	25	2%
Northeast		
Middle Atlantic	94	7%
New England	16	1%
South		
East South Central	17	1%
South Atlantic	115	8%
West South Central	40	3%
West		
California	840	61%
Mountain	90	7%
Pacific[2]	104	8%
Out of Country[3]	2	<1%

1 The US Census Bureau divides the country into four regions (Midwest, Northeast, South, and West) which are further divided into nine regional divisions. States are colored by region in the map, while thicker borders indicate states groups by regional division.

2 The Pacific regional division includes Alaska and Hawaii, though they are not depicted on the map. California is depicted as distinct from the Pacific regional division for the purposes of this map.

3 The out-of-country group includes any PLWH migrating outside of the 50 United States and Washington D.C.

- During 2020-2021, more PLWH left San Francisco (N=1,373) than PLWH who migrated into the city (N=813) (See Technical Notes "Migration of PLWH").
- Among PLWH who migrated out, most were White (55%). Those moving into San Francisco were more likely to be Black/African American (19%) or Latinx (29%) compared to those who moved out (12% and 22%, respectively).
- A higher proportion of persons who migrated out were MSM (79%) compared to persons who migrated in to San Francisco (71%).
- Persons who migrated out were generally older, with a higher proportion aged 50 years and older (51%) compared to persons who migrated in (35%). PLWH moving into San Francisco were more likely than PLWH who migrated out to be in their twenties or thirties (41% versus 27%).

Table 17.1 Characteristics of people living with HIV who migrated out of or in to San Francisco, 2020-2021

		Out-migrating PLWH[1]		In-migrating PLWH[1]	
		Number	(%)	Number	(%)
	Total	1,373		813	
Gender[2]	Cis Men	1,293	(94)	750	(92)
	Cis Women	47	(3)	32	(4)
	Trans Women	33	(2)	29	(4)
Race/Ethnicity	White	753	(55)	334	(41)
	Black/African American	167	(12)	156	(19)
	Latinx	297	(22)	232	(29)
	Asian/Pacific Islander	81	(6)	40	(5)
	Other/Unknown	75	(5)	51	(6)
Transmission Category	MSM	1,080	(79)	581	(71)
	TWSM	25	(2)	21	(3)
	PWID	48	(3)	45	(6)
	MSM-PWID	158	(12)	102	(13)
	TWSM-PWID	8	(1)	8	(1)
	Heterosexual	28	(2)	30	(4)
	Other/Unidentified	26	(2)	26	(3)
Age in Years	18-24	9	(1)	15	(2)
	25-29	67	(5)	73	(9)
	30-39	297	(22)	258	(32)
	40-49	306	(22)	186	(23)
	50-59	401	(29)	176	(22)
	60-69	247	(18)	81	(10)
	70+	46	(3)	24	(3)

1 See Technical Notes "Migration of PLWH."
2 Data on trans men are not released separately due to small numbers. See Technical Notes "Gender Status."

18 Social Determinants of Health

- Social determinants of health (SDH), including poverty level, educational attainment, health insurance coverage, median household income, and Gini index (see Technical Notes "Social Determinants of Health") were assessed among people living with HIV (PLWH) in 2017-2019. By identifying disparities in HIV health outcomes between populations or geographic areas, the goal was to use this data to help inform interventions and care services.
- PLWH were classified as having controlled HIV infection if they were virally suppressed by the end of the analysis period. People living with HIV were considered to have uncontrolled HIV infection if their latest viral load was detectable (≥200 copies/mL) or if they had no viral load test or CD4 test reported during the analysis period, suggesting they were out of care.
- Overall, a higher proportion of PLWH with uncontrolled HIV infection during 2017-2019 resided in census tracts with the highest percentage below the federal poverty level (≥13.00%), highest percentage with less than a high school diploma (≥17.00%), highest percentage uninsured (≥6.00%), lowest median household income level (<$84,000), and highest Gini index (≥0.503).

Table 18.1 People living with HIV with controlled or uncontrolled HIV infection by selected social determinants of health, 2017-2019, San Francisco

			Controlled HIV Infection		Uncontrolled HIV Infection[1]	
			Number (%)			
		Total	6,696		492	
Social Determinants of Health[2]	Below Federal Poverty Level (%)	<6.00%	1,758	(26)	69	(14)
		6.00% - 8.99%	1,232	(18)	67	(14)
		9.00% - 12.99%	1,555	(23)	100	(20)
		≥13.00% ⚑	2,151	(32)	256	(52)
	Less Than High School Diploma (%)	<4.00%	2,054	(31)	64	(13)
		4.00% - 8.99%	1,963	(29)	149	(30)
		9.00% - 16.99%	1,350	(20)	116	(24)
		≥17.00% ⚑	1,329	(20)	163	(33)
	Uninsured (%)	<2.00%	1,160	(17)	47	(10)
		2.00% - 3.99%	2,400	(36)	141	(29)
		4.00% - 5.99%	1,527	(23)	122	(25)
		≥6.00% ⚑	1,609	(24)	182	(37)
	Median Household Income[3] ($)	<$84,000 ⚑	1,783	(27)	214	(43)
		$84,000 - $115,999	1,245	(19)	98	(20)
		$116,000 - $151,999	1,654	(25)	88	(18)
		≥$152,000	2,009	(30)	91	(18)
	Income Inequality (GINI Index[4])	<0.433	1,354	(20)	73	(15)
		0.433 - 0.465	1,611	(24)	88	(18)
		0.466 - 0.502	1,973	(29)	156	(32)
		≥0.503 ⚑	1,758	(26)	175	(36)

1 During the 2017-2019 analysis period, uncontrolled HIV infection was defined as being either out of care (i.e., having no reported labs) or having a detectable HIV viral load at the most recent lab visit.
2 See Technical Notes "Social Determinants of Health."
3 Median household income is missing for PLWH in some less populated census tracts.
4 A higher Gini index score represents a higher level of income inequality in a census tract. Gini index scores range from 0 to 1.
⚑ Flagged quartiles indicate the most marginalized SDH category for a given metric.

19 Stigma among People with HIV

- Data from the 2015-2019 cycles of the Medical Monitoring Project (see Technical Notes "Medical Monitoring Project") were used to measure the prevalence of four dimensions of HIV stigma following an HIV diagnosis: disclosure concerns, concerns with public attitudes about HIV, personalized HIV stigma and negative self-image.
- The most common types of stigma were disclosure concerns (69%) and personalized stigma (51%).
- Trans women had higher disclosure concerns, concerns with public attitudes, and personalized stigma compared to cis men and cis women.
- All four stigma dimensions were lower for those 55 years of age and older.
- Foreign born individuals reported higher levels of disclosure concerns, concerns with public attitudes and negative self-image.
- Individuals experiencing homelessness reported higher levels of stigma for all four stigma dimensions.

Table 19.1 Prevalence of stigma measures by demographic factors, Medical Monitoring Project, 2015-2019, San Francisco

			Stigma Measures[1]			
			Disclosure Concerns[2]	Public Attitudes[3]	Personalized Stigma[4]	Negative Self-image[5]
		Number	Row %			
	Total	886	69%	47%	51%	29%
Gender Identity[6]	Cis Men	801	68%	46%	50%	29%
	Cis Women	59	73%	55%	57%	31%
	Trans Women	23	87%	69%	63%	30%
Age (years)	18 - 34	73	79%	54%	51%	33%
	35 - 44	122	77%	52%	61%	41%
	45 - 54	263	70%	47%	56%	29%
	55+	428	64%	44%	45%	25%
Race/Ethnicity	White	480	66%	40%	54%	26%
	African American	115	76%	54%	48%	26%
	Latinx	184	71%	55%	46%	32%
	Asian/Pacific Islander	42	83%	47%	42%	22%
	Multi-race/Other	65	70%	60%	56%	49%
Self-identified Sexual Orientation	Lesbian or Gay	665	68%	44%	50%	28%
	Straight or Heterosexual	122	73%	55%	53%	33%
	Bisexual	62	70%	61%	59%	40%
	Other	31	82%	51%	61%	23%
Education	Less than college	487	65%	49%	52%	30%
	Bachelors degree or higher	394	75%	45%	50%	27%
Country of Birth	US or Puerto Rico	706	67%	44%	51%	27%
	Foreign born	175	79%	59%	51%	37%
Time since HIV Diagnosis	<5 years	87	80%	52%	41%	31%
	5 - 9 years	121	82%	52%	58%	40%
	≥ 10 years	678	65%	45%	51%	27%
Housing Status[7]	Housed	735	69%	45%	49%	28%
	Homeless	150	71%	56%	61%	36%

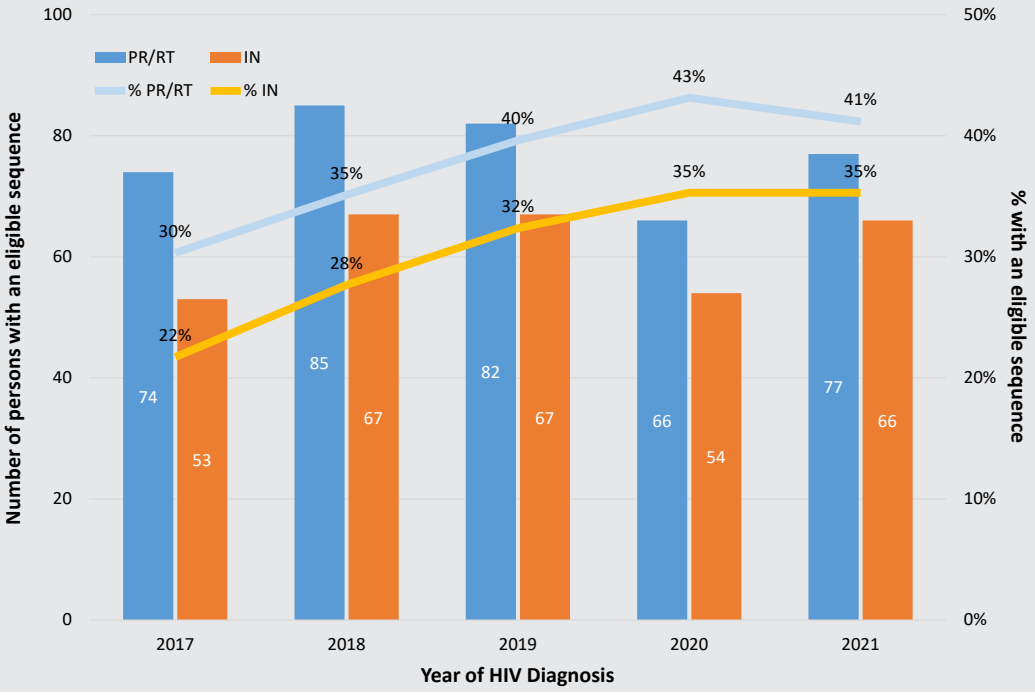
1 Stigma prevalence counted as "agree" or "strongly agree" to each stigma dimension as outlined below.
2 "I am very careful who I tell that I have HIV" or "I worry that people who know I have HIV will tell others."
3 "Most people think that a person with HIV is disgusting" or "Most people with HIV are rejected when others find out."
4 "I have been hurt by how people reacted to learning I have HIV" or "I have stopped socializing with some people because of their reactions of my having HIV" or "I have lost friends by telling them I have HIV."
5 "I feel that I am not as good a person as other because I have HIV" or "Having HIV makes me feel unclean" or "Having HIV makes me feel that I'm a bad person."
6 Gender identity is measured by self-reported sex at birth and current gender identity. Data for trans men not shown in order to protect confidentiality due to small numbers.
7 Homeless defined as living in a single room occupancy hotel (SRO), in a shelter, on the street or in a car at any point in the past 12 months.

20 Transmitted Drug Resistance and HIV-1 Subtype

HIV-1 Transmitted drug resistance

- HIV-1 Transmitted drug resistance (TDR) occurs when a drug-resistant HIV-1 strain is transmitted to a treatment naïve person. TDR is of concern as it has a potential to compromise the effectiveness of antiretroviral therapy.
- TDR associated with antiretroviral drug classes including nucleoside reverse transcriptase inhibitors (NRTI), non-nucleoside reverse transcriptase inhibitors (NNRTI), protease inhibitors (PI), and integrase strand transfer inhibitors (INSTI) were assessed among people newly diagnosed with HIV in 2017-2021, using HIV protease (PR), reverse transcriptase (RT) and Integrase (IN) sequence data collected from routine laboratory reporting. PR/RT sequences were used to assess TDR to NRTI, NNRTI and PI drug classes. IN sequences were used to assess TDR to INSTI drug class (see Technical Notes "Transmitted Drug Resistance and HIV-1 Subtype".)
- The proportion of new diagnoses with a sequence that met the inclusion criteria for TDR analyses was largely dependent upon the proportion who were linked to care, received genotypic testing within 3 months of HIV diagnosis and prior to initiating antiretroviral treatment, and had sequences reported to the HIV registry.
- The proportion with an eligible sequence increased from 2017 to 2021. In 2021, 41% (N=77) had an eligible PR/RT and 35% (N=66) had an eligible IN sequence included in the analysis.

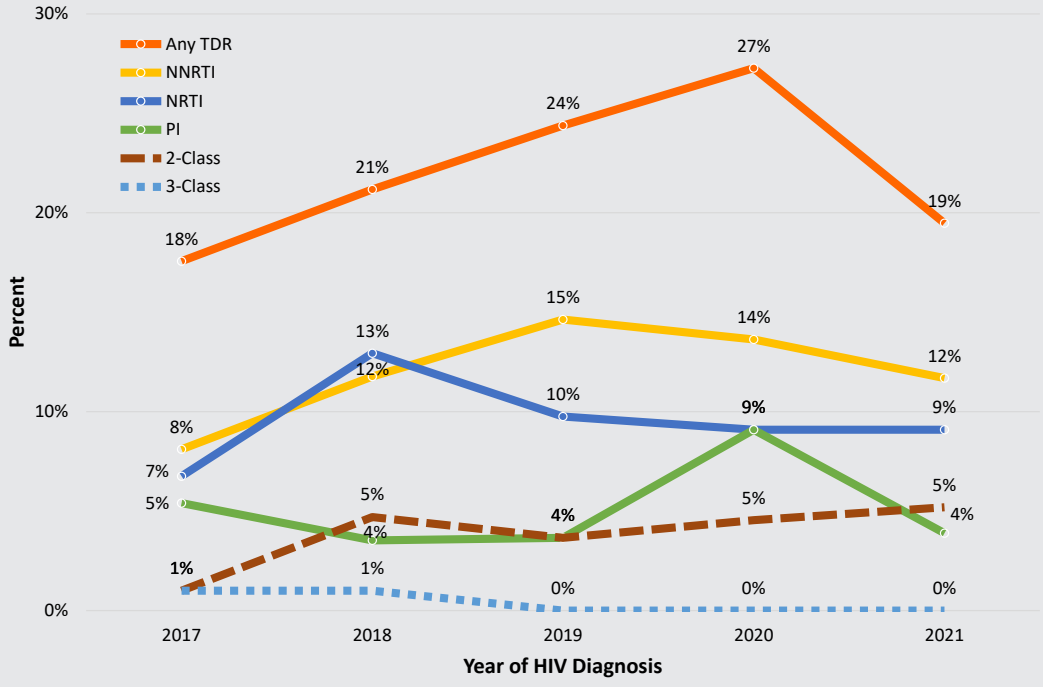
Figure 20.1 People newly diagnosed with HIV who had an eligible HIV sequence for TDR analysis[1], by sequence type, 2017-2021, San Francisco



1 Limited to people with a sequence collected within 3 months of diagnosis and able to be interpreted for the presence of drug class mutation, and who had no evidence of antiretroviral drug use prior to the date of sequence collection. PR/RT can include PR/RT sequences reported as PR/RT only or PR/RT/IN reported together. IN can include IN sequence reported as IN only, or PR/RT/IN reported together. See Technical Notes "Transmitted Drug Resistance and HIV-1 Subtypes." Sequence reporting and ART data collected for those diagnosed in 2021 may be incomplete.

- The proportion with TDR to any of NRTI, NNRTI, and PI drug classes increased from 18% in 2017 to a high of 27% in 2020 and decreased to 19% in 2021.
- For most years, TDR occurred most frequently for NNRTI, followed by NRTI and PI. In 2021, the proportion with TDR to NNRTI, NRTI, and PI was 12%, 9%, and 4%, respectively.
- TDR to more than one of NRTI, NNRTI, PI drug classes was relatively low. The proportion with TDR for 2 drug classes was lowest in 2017 (1%), increased to 5% in 2018 and remained stable through 2021. Only 1% (N=1) in 2017 and 1% (N=1) in 2018 had TDR to all 3 drug classes.
- TDR to INSTI drug class was uncommon during 2017 to 2021. Only 2% (N=1) in 2017 and 1% (N=1) in 2018 had INSTI TDR (Figure not shown.)

Figure 20.2 Transmitted drug resistance among people newly diagnosed with HIV and with eligible PR/RT sequence[1], by antiretroviral drug class[2], 2017-2021, San Francisco



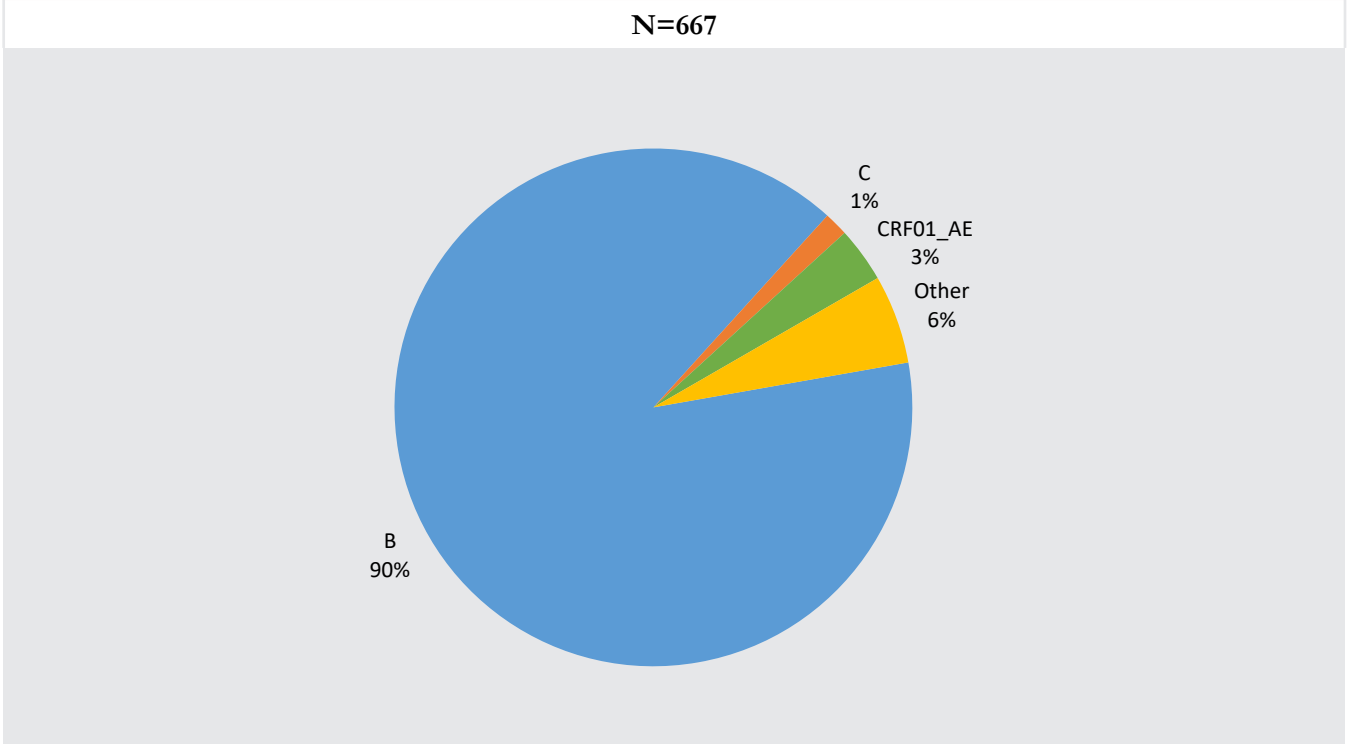
1 Limited to people with a PR/RT sequence collected within 3 months of diagnosis and able to be interpreted for the presence of drug class mutation, and who had no evidence of antiretroviral drug use prior to the date of sequence collection. See Technical Notes "Transmitted Drug Resistance and HIV-1 Subtypes." Sequence reporting and ART data collected for those diagnosed in 2021 may be incomplete.

2 Antiretroviral drug classes include non-nucleoside reverse transcriptase inhibitors (NNRTI), nucleoside reverse transcriptase inhibitors (NRTI), and protease inhibitors (PI).

HIV-1 subtype

- Of 1,033 people newly diagnosed with HIV in 2017-2021, 667 (65%) had an eligible sequence included in the HIV-1 subtype analysis (see Technical Notes "Transmitted Drug Resistance and HIV-1 Subtype".)
- Overall, 597 (90%) were subtype B. CRF01_AE was the most common non-B subtype, occurring in 23 (3%) of new diagnoses.

Figure 20.3 HIV-1 subtypes[1] among people newly diagnosed with HIV, 2017-2021, San Francisco



1 Only sequences with 500 characters or more were included. See Technical Notes "Transmitted Drug Resistance and HIV-1 Subtypes." Sequence reporting for those diagnosed in 2021 may be incomplete.

Technical Notes
(in alphabetic order by topic)

CD4-based Model (Updated 07/22/2024)

The CD4 cell count can be used to estimate how long someone has been infected with HIV. HIV targets CD4 cells and without treatment, HIV reduces the number of CD4 cells in a person's body. When no treatment has been received, the CD4 cell count can be used to estimate the time since infection at the date of CD4 test. The CD4-based model uses HIV surveillance data and the first CD4 value after diagnosis to estimate HIV incidence (new infections in people with diagnosed and undiagnosed HIV), HIV prevalence (existing HIV infections among people with diagnosed and undiagnosed with HIV), and the percentage of new and existing HIV infections that are undiagnosed.

The CD4 data for people who had no evidence of antiretroviral therapy (ART) use and no viral suppression (viral load result <200 copies/mL) prior to their first CD4 test result are included in this model. The date of HIV acquisition is estimated for each person with a CD4 test by using a CD4 depletion model[1]. To account for people without a CD4 test result, people with CD4 test results are assigned a weight based on the year of HIV diagnosis, sex, race/ethnicity, transmission category, age at diagnosis, disease classification, and vital status at the end of the analytic year. Then, based on the estimated time from HIV infection to diagnosis, the diagnosis delay distribution can be estimated by using standard survival analysis for right truncated data and used to estimate annual HIV incidence (new infections), which includes people with diagnosed and undiagnosed infection.

The annual estimates of the number of new HIV infections (incidence, diagnosed and undiagnosed), HIV prevalence (diagnosed and undiagnosed), and the percentage of persons with undiagnosed infection in this report were generated from the CD4 Model SAS programs (version 4.0)[2] developed by CDC which applied the CD4 depletion model to estimate the distribution of delay from infection to diagnosis and use prevalence of diagnosed infection and data on deaths among persons aged 13 years and older with HIV in San Francisco.

The number of people with undiagnosed HIV infection at the end of a given year is estimated by subtracting the number of cumulative reported diagnoses from cumulative infections. HIV prevalence, which represents counts of people with diagnosed or undiagnosed HIV infection who were alive at the end of a given year, is estimated by adding the number of persons with undiagnosed HIV infection to the number of persons living with diagnosed HIV infection reported.

The percentage of diagnosed (or undiagnosed) infections is determined by dividing the number of people living with diagnosed (or undiagnosed) infections by the total prevalence for each year.

The CD4 model relies on a series of assumptions: (1) the CD4 depletion model is accurate; (2) individuals received no ART treatment before their first CD4 test; (3) all data adjustments (e.g., multiple imputation for missing values of transmission category, weighting to account for those without a CD4 test) are unbiased (the error is random and not systematic); and (4) a person's infection, diagnosis, and death occur in a "closed" population (no migration) or balanced population (approximately the same number of infected people moved into or out of the area under consideration).

1 Song R, Hall HI, Green TA, Szwarcwald CL, Pantazis N. Using CD4 Data to Estimate HIV Incidence, Prevalence, and Percent of Undiagnosed Infections in the United States. J Acquir Immune Defic Syndr. 2017 Jan 1; 74(1):3-9.

2 SAS Programs: Estimating HIV Incidence and Prevalence using the CD4-Based Model and eHARS Data, User Guide Version 4.0, May 2021

Cumulative Viral Load

People were included if they were diagnosed with HIV during the specified time period, were a San Francisco resident at HIV diagnosis, alive 12 months after HIV diagnosis and had ≥2 viral load tests within 12 months after diagnosis. Consecutive viral load pairs were used to calculate time spent >200 copies/mL, >1,500 copies/mL and >10,000 copies/mL for the 12 months after HIV diagnosis, where the one-year follow-up period was divided into time segments using consecutive viral load pairs. If both viral load values were above/below the viral threshold within each segment, it was assumed all days in the segment were also above/below the threshold. The difference between the two viral load values and the time in days of the segment were used to calculate a rate of viral load change over time in instances where a segment contained one value above the viral threshold and one value below the threshold. This rate was used to calculate how many days in the segment were spent above the viral threshold. The time spent above the threshold for each segment was summed across all observed segments to yield a single measurement for each individual. The percentage of time spent above each viral threshold was calculated by dividing the number of days spent above by the total time observed. If an individual did not have a viral load measure on the date of HIV diagnosis, the first viral load after HIV diagnosis was used as the beginning of the observation period, and the last viral load test in the 12-month follow-up was used as the end of the observation period. Data for small subpopulations are not reported due to concerns about the stability and accuracy of the cumulative viral load measurement.

Date of Initial HIV Diagnosis

The date of HIV diagnosis for newly diagnosed people is determined based on the earliest date of any of the following: positive HIV antibody test, positive HIV antigen/antibody combination test, detectable viral load test, or physician-documented diagnosis in absence of sufficient laboratory evidence. The date of initial HIV diagnosis for assessing trends in new HIV diagnoses in this report takes into account patient self-report of a positive HIV test as noted in the medical record that was prior to the confirmed HIV diagnosis made by laboratory or clinical evidence. However, CD4 or undetectable viral load tests prior to the confirmed HIV diagnosis are not used to determine date of initial HIV diagnosis. Data for the most recent year should be interpreted with caution as the number of diagnoses may be underestimated due to reporting delays.

Death Ascertainment

Death information among people reported with HIV is obtained through the following mechanisms: (1) monthly matches with local vital statistics registry, (2) annual matches with the Social Security Death Master File (3) annual matches with the National Death Index (NDI), (4) routine medical record review, (5) notification from other health departments, and (6) matches with other disease registry databases. Matches to the NDI include matches to both the NDI Early Release Program (https://www.cdc.gov/nchs/ndi/ndi_early_release.htm) and the NDI final file.

Cause of death information on death certificates is summarized and coded using the International Classification of Diseases, 10th revision (ICD-10) for deaths that occurred since 1999. A single cause of death is identified from all reported conditions that began the chain of events that resulted in death; this is known as the underlying cause of death. All conditions (including the underlying cause of death) listed on the death certificate are known as the multiple causes of death (http://www.cdc.gov/nchs/icd/icd10.htm). We obtained the ICD codes from annual matches to the NDI from 1999 to 2020. Decedents through 2020 have been matched to the NDI final file; cause of death information in this report is available for deaths through 2020. NDI information for 2021 decedents was not available at the time of this report's preparation.

Deaths classified as B20-B24 and all Stage 3 (AIDS)-related opportunistic infections and cancers listed on the death certificate were included in the HIV-related classification. Deaths classified as R99 (ill-defined and unknown cause of mortality) were included in the non-HIV-related classification. Cause of death information in the NDI Early Release file may later be reclassified in the NDI final file.

Cause of death information for racial subgroups such as Asian, Pacific Islander, Native American, and multiracial decedents was not displayed due to small numbers.

Case-fatality rates in people diagnosed with HIV are calculated using the single, underlying cause of death for each person.

Estimate of ART Use

Information on ART use was obtained from medical chart reviews or reported by health care providers. The use of surveillance data to estimate use of ART most likely resulted in an underestimate of ART use. The underestimate occurred because use of ART was collected at the time a person with HIV infection was reported (which was often close to the time that they were diagnosed), a time when some people have not yet begun treatment. The San Francisco Department of Public Health (SFDPH) collected follow-up information from selected health care facilities. For people who received care at these sites, treatment data were likely to be more complete because it allowed us to capture the use of ART after diagnosis and the date the case report was completed. Follow-up information was not available for people who have moved away from San Francisco or who received ongoing care outside of the city. Surveillance data provided information that indicated when a person was prescribed ART but did not provide information on use or adherence. People whose medical records indicated that they were prescribed ART were assumed to have received and used it.

The lower level estimate of ART use (Table 3.7 on page 24) was calculated among all people living with HIV. The upper level estimate (Table 3.7 on page 24, Figure 3.4 on page 25) was calculated among people who had follow-up information within the last two years, whose chart review was completed between January 2020 and March 2022, and who were not known to have moved out of San Francisco.

Female Presumed Heterosexual Contact

In 2010, the CDC HIV Incidence and Case Surveillance Branch implemented a definition for female presumed heterosexual contact to reclassify the transmission category for women diagnosed with HIV who would otherwise be reported with no identified risk. The definition for female presumed heterosexual contact was first proposed by the Council of State and Territorial Epidemiologists[3]. Like other transmission categories, the definition uses patient history variables collected on the HIV adult case report form. The female presumed heterosexual contact definition includes the following components: (1) the patient's sex at birth is female, (2) the patient had sex with male(s), (3) the patient had no indication of injection drug use, and (4) there is no other known information that would suggest a likely alternative source of HIV infection.

Gender Status

As part of routine HIV case surveillance, sex at birth is collected. People who are classified as female at birth and have no other gender identity noted are classified as cis women. People who are classified as male at birth and have no other gender identity noted are classified as cis men. In September 1996, SFDPH began collecting transgender status when this information is contained in the medical record. Transgender individuals are listed as either trans women or trans men and reported through active and passive surveillance methods (see Technical Notes "HIV Surveillance Methods"). Due to the small number of trans men diagnosed with HIV and small population size, data on trans men are sometimes suppressed in this report to protect confidentiality. We believe this report likely underestimates the number of trans women and trans men affected by HIV because gender status information may not be complete in HIV surveillance data sources, such as the medical record. Information that may be discussed with the health care provider but not recorded in the medical record is generally not available for the purposes of HIV case reporting.

Grouping of Data Categories

Data in certain racial/ethnic or risk categories are grouped together when the number of people with HIV in that particular group is small and/or does not present significant trends. For example, "Other" in the Race/Ethnicity breakdown in some tables or figures represents Asian/Pacific Islander, Native American, and people of multiple race/ethnicity. Whenever possible, this report presents the expanded racial/ethnic categories rather than aggregating into the group "Other." The label "Other" in the Transmission Category breakdown may include transfusion recipients, hemophiliacs, heterosexuals, people acquiring HIV perinatally, or people of unidentified risk.

HIV and STI Diagnosis

The diagnosis of STI among PLWH was determined through a computerized match of the SFDPH HIV and STI case registries. The data from the STI registry included people reported with gonorrhea, chlamydia, non-gonococcal urethritis, or infectious syphilis. All STIs included in this report occurred after the HIV diagnosis.

3 Council of State and Territorial Epidemiologists Position statements 2007: Heterosexual HIV transmission classification. Available from https://cdn.ymaws.com/www.cste.org/resource/resmgr/ps/07-id-09.pdf.

HIV Care Outcomes and Definitions

The SFDPH monitors engagement in care and care outcomes among people newly diagnosed and living with HIV using reports of CD4, HIV viral load and genotype tests as indicators of care, and viral load test results to measure viral suppression, defined as a viral load less than 200 copies/mL. For new diagnoses, linkage to care within 30 days of diagnosis, retention in care 3-9 months after linkage, and viral suppression within 6 and 12 months of diagnosis were assessed. For PLWH, receipt of care (one laboratory test), retention in care (two laboratory tests at least three months apart) and viral suppression in the specified calendar year were assessed.

Complete laboratory reporting of HIV-related test results is critical to evaluating care outcomes and data-to-care activities (using HIV surveillance and other data sources to identify people with HIV who may not be in care, conduct outreach, and provide linkage to care and other support or prevention services). Incomplete care information may result for people who received care outside of San Francisco or participated in research studies in which the test results were not reported to SFDPH (Note: California laws require laboratories to report all HIV-related test results to the local health department where the provider is located). In addition, some patients may be in care but do not have any laboratory tests performed in the time period assessed.

HIV Case Rates and HIV Mortality Rates

Annual race-specific diagnosis rates were calculated as the number of people diagnosed with HIV for a particular racial/ethnic group during each year divided by the San Francisco population for that racial/ethnic group, multiplied by 100,000. Age-adjusted mortality rates were calculated for people 18 years and older. For each racial/ethnic and gender group, the number of deaths among people with HIV each year was divided by annual projected San Francisco population estimates across 14 age groups (18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+ years) to generate crude rates applied to the standard population, defined using the annual California population estimates from the Department of Finance. Population denominators by year were obtained from the State of California, Department of Finance, Demographic Research Unit: California Population Projections[4] (http://www.dof.ca.gov/Forecasting/Demographics/Projections/). The annual population estimates were not available for transgender people. The San Francisco trans women population estimate used was from Raymond HF, Wilson EC, McFarland W. Transwoman Population Size. Am J Public Health. 2017 Sep;107(9):e12. doi: 10.2105/AJPH.2017.303964. PMID: 28787216; PMCID: PMC5551612.

HIV Disease Stage 3 (AIDS) Survival

Survival time was calculated as the time between the date of HIV disease stage 3 (AIDS) diagnosis and the date of death. This analysis included people who met the case definition for HIV disease stage 3 (AIDS). The follow-up information for cases was obtained through retrospective and prospective reviews of laboratory records and medical charts. Dates of death were obtained through review of local death certificates, reports from the State Office of AIDS, and matches with the National Death Index (NDI) and Social Security death

4 State of California, Department of Finance, Report P-3: State and County Population Projections by Race/Ethnicity, Detailed Age, and Gender, 2010-2060. Sacramento, California, July 2021.

files. The most recent NDI and Social Security death file matches included deaths that occurred through December 31, 2020. Survival time estimates reflect deaths that were HIV- as well as non-HIV related. People not known to have died were censored on the date of their last known follow-up or on December 31, 2020, whichever was more recent.

HIV Pre-exposure Prophylaxis (PrEP) Regimens

For HIV negative people, pre-exposure prophylaxis is an effective HIV prevention method offered through various medical providers in San Francisco. PrEP may be prescribed using different formularies with various dosing schedules. The daily PrEP regimen involves taking oral medication once per day, every day.
The PrEP 2-1-1 regimen schedules taking oral medication around times of sex: two pills 2-24 hours before sex, one pill 24 hours after the first dose, and one final pill 24 hours after second dose. People that have sex more than 24 hours after taking the first dose, or having sex over multiple days, continue taking one pill every day until two doses have been taking following the last time of sex. Taking medication is then discontinued.

Other PrEP regimens are not evaluated in this report.

HIV Qualitative Pool Testing

The San Francisco Public Health Laboratory screens patients who test negative on point-of-care (POC) HIV tests through pooled RNA testing. Sera from ten patients are combined and the mixture is tested for the presence of HIV RNA. If HIV RNA is found, then each patient's serum sample is tested individually. This method provides a means of quickly testing several patients at a time who may not yet have enough antibody or antigen in their blood to yield a positive result on a POC test. It is used by sites that see large numbers of uninsured and underinsured clients who are at risk of HIV. The qualitative pool testing data shown in this report included three large community testing sites: Strut- San Francisco AIDS Foundation, San Francisco City Clinic and Mission Wellness Pharmacy.

HIV Surveillance Methods

San Francisco HIV cases are reported primarily through active surveillance activities in which public health personnel review laboratory and pathology reports and medical records to identify cases and complete the case report forms. HIV cases are also identified through passive reporting from HIV medical and testing providers, review of death certificates, validation studies using secondary data sources such as hospital billing records or other disease registries, and reports from other health departments. HIV cases are routinely de-duplicated with other California counties, states, and U.S. territories. The surveillance system is evaluated regularly for completeness, timeliness, and accuracy.

The completeness of case reporting of HIV diagnoses in 2020 was evaluated (on 12/31/2021) and found to be 99% (using CDC developed reporting delay model). In terms of timeliness, an estimated 96% of 2020

diagnoses were reported within six months of HIV diagnosis.

The HIV data in this report included people who were residents of San Francisco at the time they were diagnosed with HIV (all stages of infection) including San Francisco residents who were diagnosed in other jurisdictions. This report also included data in some sections for out-of-jurisdiction residents who were diagnosed or received care in San Francisco (see Technical Notes "Out-of-Jurisdiction Residents Diagnosed with HIV") or who moved to San Francisco after HIV diagnosis (see Technical Notes "Residence and Receipt of Care for PLWH"). San Francisco started name-based case reporting for HIV cases in April 2006, as mandated by California law. All cases included in this report were reported confidentially by name.

Housing Status

The housing status for people with HIV is determined through collection of address at time of diagnosis and current address through laboratory reports, passive case reports, medical record review, death certificates, and reports from other health departments. A person is defined as homeless if: (1) the medical record states that the patient is homeless or not housed or (2) the person's address is a known homeless shelter or Navigation Center.

People with missing address information are not classified as homeless. Individuals are also considered "not homeless" if they reside in (1) single room occupancy (SRO) facility, (2) transitional housing, including shelter-in-place (SIP) shelters, (3) partner's, family member's, or other non-family member's residence, or (4) institutional facility (examples: hospice, inpatient drug/alcohol recovery facility, facility housing physically/mentally disabled, residential treatment program, correctional facility, long-term care facility).

People are classified as living in an SRO if the residential addresses matches a known SRO facility in San Francisco. A list of SRO facility addresses is maintained and updated annually using data from the Department of Building Inspections.

The HIV surveillance definition for homelessness excludes marginalized or unstable housing, and thus our findings may differ from other Department of Public Health or City and County of San Francisco programs.

Linkage Integration Navigation Comprehensive Services

Linkage Integration Navigation Comprehensive Services (LINCS) is a program maintained by SFDPH that helps PLWH re-engage with care. Since 2011, health care navigators on the LINCS team have worked at San Francisco City Clinic and other SFDPH sites to address patient needs, including finding insurance, attending care appointments and adherence to medication. Patients may have come to LINCS through direct referral by a provider or, more recently, through not-in-care lists generated from HIV surveillance or medical record databases. LINCS programmatic data were used to define patients' housing status. Trans women were defined as either being transgender in HIV surveillance or in LINCS programmatic data. Transmission category was determined from HIV surveillance data.

LINCS outcomes can vary from year to year due to staffing capacity and referral sources. The Data to Care (DTC) program began in 2016 and included people reported in the San Francisco HIV case surveillance registry whose most recent address is in San Francisco and who had never had an HIV lab recorded after their HIV diagnosis, or had no evidence of a care visit in 12 months or longer (defined as a HIV viral load, CD4 test or genotype test). In addition, there were a number of individuals referred to the LINCS program who were not eligible for navigation services for reasons such as having moved out of the jurisdiction, already being in HIV care, not being locatable, or being deceased or incarcerated.

Medical Monitoring Project

The Medical Monitoring Project (MMP) is an ongoing CDC-funded national HIV/AIDS supplemental surveillance project. San Francisco is one of 23 project areas currently conducting the MMP. A two-stage sampling is used to sample adults with diagnosed HIV and a most recent address reported in the National HIV Surveillance System of San Francisco. Information about care utilization, clinical outcomes, resource needs, and HIV risk behaviors is collected through patient interviews and medical chart review. Interview and medical record abstraction data from 886 participants from the 2015-2019 San Francisco MMP cycles were used in this report. Data were weighted for the probability of selection, non-response, and reporting delays. Prevalence estimates are weighted percentages and might not sum to 100 because of rounding.

Migration of PLWH

The migration status of PLWH was determined using the most recently reported addresses at the end of calendar years 2019, 2020, and 2021. PLWH were required to have a valid address reported for at least two of the three years to have migration assessed. Valid addresses for assessing migration included unhoused addresses that could be mapped to a specific California county or out-of-state jurisdiction (e.g., "Homeless" in "San Francisco Co."). Out-migrating PLWH (i.e., those who moved out of San Francisco) in 2020-2021 were those with a San Francisco address for 2019 or 2020, later followed by an out-of-jurisdiction (OOJ) address for 2020 or 2021. In-migrating PLWH (i.e., those who moved into San Francisco) in 2020-2021 were those individuals with an OOJ address for 2019 or 2020 and later followed by a San Francisco address for 2020 or 2021.

Out-of-Jurisdiction Residents Diagnosed with HIV

Routine HIV case surveillance assigns case ownership by residence at diagnosis. People with HIV who resided in San Francisco at time of diagnosis were considered San Francisco cases. People with HIV who were diagnosed or received care in San Francisco but resided elsewhere at time of diagnosis were considered out-of-jurisdiction (OOJ) cases. In 2009, the California Department of Public Health upgraded the surveillance database and updated procedures, and case reporting for OOJ cases was conducted and reported in the same manner as San Francisco cases.

Residence and Receipt of Care for PLWH

The overall number of PLWH in San Francisco is affected by 1) out-migration: San Francisco residents at the time of diagnosis who later moved out of San Francisco, and 2) in-migration: OOJ residents at the time of diagnosis who moved to and received care in San Francisco. Because in- and out-migration occurred and the residence at time of diagnosis may have differed from the current residence among PLWH, SFDPH collected and updated information regarding current residence for PLWH who resided in San Francisco at time of diagnosis as well as PLWH who resided elsewhere at time of diagnosis but received care in San Francisco.

Care indicators (defined by using CD4, viral load, or genotype tests) were assessed for PLWH known to reside in San Francisco, based on their most recent available residence at the end of the calendar year, regardless of their residence at time of diagnosis (Table 3.4 on page 21). San Francisco residents at diagnosis who subsequently moved outside of San Francisco were excluded, and people who resided elsewhere at time of HIV diagnosis and moved to San Francisco after diagnosis were included.

The extent of care utilization and migration patterns among people with HIV cannot be fully understood until more complete laboratory and residence information is collected and shared between jurisdictions.

San Francisco HIV/STI Home Testing Program

The San Francisco HIV/STI Home Testing Program (Take Me Home) is a partnership between the SFDPH Community Health Equity & Promotion (CHEP) Branch, Disease Prevention and Control (DPC) Branch, and the National Mailed HIV Testing Program developed by Building Healthy Online Communities (BHOC) and the Emory University, Rollins School of Public Health. The goal is to provide a low-barrier, confidential, home-based HIV/STI testing option for men who have sex with men in San Francisco and to reach individuals who are not accessing HIV/STI testing locations.

The program promotes free mailed HIV/STI home testing via online social networking apps. Clients are directed to the home test portal through links promoted on the apps, and they can order the home test kits if they have a San Francisco mailing address.

The program was piloted from March to December 2020 and offered only the HIV OraQuick rapid test in this period. This was a self-administered test that allowed clients to collect their saliva sample, perform the test, and interpret the test result themselves at their location of choice based on the instructions provided in the test kit. Outcomes of this pilot phase were published in the 2020 HIV Epidemiology Annual Report.

In January 2021, the program was expanded to include hepatitis C virus (HCV), syphilis, gonorrhea, and chlamydia testing. Clients were able to self-collect rectal and throat swabs and a urine sample for "3-site" gonorrhea and chlamydia testing. Clients were offered a laboratory-based HIV antibody test (fingerstick dried blood spot) instead of a self-administered HIV OraQuick (oral swab). The specimen collection kits were mailed to clients and contained supplies and instructions to collect samples for tests they ordered. The samples were

then mailed to a designated laboratory for processing. Clients were able to access the results through a secure portal. Clients who tested positive for HIV, HCV or an STI are contacted by a disease intervention specialist (DIS) from SFDPH's LINCS program and were connected to treatment and care.

Social Determinants of Health

Social determinants of health (SDH) indicators among people with HIV in San Francisco were evaluated in this report (federal poverty level, educational attainment, health insurance coverage, median annual household income, and Gini index of income inequality). San Francisco census tract level SDH data were derived from the U.S. Census Bureau American Community Surveys (ACS) 2015-2019. People in the San Francisco HIV case surveillance registry, who were 18 years and older and whose most recent address in 2017-2019 was in San Francisco, had their residential addresses geocoded to the U.S. census tract level. People with a residential address that could not be geocoded to the census tract level (for example, homeless people) were not included in this analysis. Residential census tracts were assigned SDH indicator values by linking to the ACS 2015-2019. SDH indicator values assigned to a case represented the poverty level, educational attainment, health insurance coverage, median household income, and the Gini index of income inequality of the census tract the case lived in at time of most recently reported 2017-2019 address. The Gini index is a statistical measurement of the dispersion of household income distribution, with higher indices reflecting higher income inequality in the census tract. To be representative of San Francisco, all five SDH indicators were divided by quartiles using ACS data from San Francisco census tracts.

Stage of Disease at HIV Diagnosis

In 2014, the United States surveillance case definition[5] for HIV infection among adults and adolescents aged ≥13 years and children age<13 years was revised to expand the HIV infection classification staging system into five stages of HIV infection as described below. With the new case definition, stages 1-3 were classified based on the first CD4 T-lymphocyte count and age on date of CD4 T-lymphocyte test, unless there was a stage-3-defining opportunistic illness. The CD4 T-lymphocyte percentage of total lymphocytes was only used when the corresponding CD4 T-lymphocyte count was unknown. This change in definition may have reduced the number of people diagnosed with stage 3 in 2014 and onward.

- HIV infection stage 0: This stage is early HIV infection and is established by a sequence of discordant HIV test results indicative of early HIV infection. The criteria for stage 0 infection can be established by a testing history of 1) a confirmed HIV positive test that occurs 180 days or less after a negative or indeterminate test for HIV infection, 2) a negative or indeterminate HIV antibody test on or less than 180 days before a positive HIV virologic test and on or less than 60 days after a positive HIV antibody test, or 3) a negative or indeterminate HIV antibody test on or less than 60 days after a positive HIV virologic test. This sequence of discordant results may be based on testing history (previous laboratory documented or patient's self-report of negative/indeterminate results), or by a HIV testing algorithm. If the criteria for stage 0 are met, the stage is 0 (supersedes other stages) regardless of criteria for other

5 Selik RE, Mokotoff ED, Branson B, Owen SM, Whitmore S, Hall HI. Revised Surveillance Case Definitions for HIV Infection -- United States, 2014. MMWR 2014;63(No. RR-3):1-10.

stages (CD4 T-lymphocyte test results and opportunistic illness diagnoses).

- HIV infection stage 1-3: HIV infection stage 1-3 is based on age-specific CD4 T-lymphocyte count or CD4 T-lymphocyte percentage of total lymphocytes.

	Age on date of CD4 T-lymphocyte test					
	<1 year		1-5 years		≥6 years	
Stage	Cells/ µL	%	Cells/ µL	%	Cells/ µL	%
1	≥1,500	≥34	≥1,000	≥30	≥500	≥26
2	750-1,499	26-33	500-999	22-29	200-499	14-25
3	<750	<26	<500	<22	<200	<14

Data on people with HIV infection, stage 3 (AIDS) include people whose infection has ever been classified as stage 3 (AIDS).

- HIV infection, stage unknown: No information available on CD4 count or percentage and no reported information on AIDS-defining conditions (every effort is made to collect CD4 counts or percentages at time of diagnosis).

Transmitted Drug Resistance and HIV-1 Subtypes

The presence of HIV drug resistance-associated mutations (DRAMs) and the HIV-1 subtypes were determined using the Secure HIV Transmission Cluster Engine (Secure HIV-TRACE) Homology Module. The Secure HIV-TRACE is a web-based application developed collaboratively by the CDC, University of California, San Diego, and Temple University to allow local health agencies to securely conduct data quality checks, determine subtype, identify the DRAMs, and construct molecular clusters. The CDC mutation list of surveillance was applied to determine transmitted drug resistance (TDR)[6].

HIV protease (PR) and reverse transcriptase (RT) sequences collected from routine laboratory reporting were used to assess TDR associated with three drug classes -nucleoside reverse transcriptase inhibitors (NRTI), non-nucleoside reverse transcriptase inhibitors (NNRTI), and protease inhibitors (PI). HIV Integrase (IN) sequences were used to assess TDR to Integrase strand transfer inhibitors (INSTI).

PR/RT or IN sequences were included in the TDR analyses if they were obtained from HIV genotypic testing performed within three months of HIV diagnosis, and from people with no evidence of prior antiretroviral treatment. For people with multiple sequences, the earliest and longest sequence was used. HIV sequences were excluded from the analysis if they 1) were possible HXB2, the wild-type reference strain, or contaminant, 2) do not have all amino acid positions specified in the CDC mutation list, or 3) have not been classified as the following HIV subtypes: A, B, C, D, F, G, CRF01_AE and CRF02_AG as listed in the CDC mutation list.

The Secure HIV-TRACE uses Comet v2.2 to determine common HIV-1 subtypes which were evaluated only among sequences with 500 characters or more.

6 McClung RP, Oster AM, Ocfemia MCB et al. Transmitted Drug Resistance Among Human Immunodeficiency Virus (HIV)-1 Diagnoses in the United States, 2014-2018. Clin Infect Dis;74(6):1055–62.

D Data Tables

	2020											
Age Group	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
<30 years	1804	1636	1075	538	775	1020	1181	1191	1208	1262	1075	1127
30-39 years	2248	2017	1378	877	1153	1562	1670	1513	1523	1619	1407	1447
40-49 years	1079	998	719	334	497	752	799	755	753	753	702	717
50-59 years	868	806	538	245	443	609	624	632	616	674	579	646
60+ years	920	878	620	359	493	669	637	694	723	747	671	753

	2021											
Age Group	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
<30 years	1115	990	1224	1290	1260	1393	1457	1507	1565	1426	1471	1407
30-39 years	1572	1520	1868	1763	1739	1886	1837	1892	1899	1789	1730	1733
40-49 years	808	838	955	916	948	919	1071	1074	1003	993	1005	936
50-59 years	638	687	802	808	805	854	896	894	902	880	860	832
60+ years	778	791	1017	942	896	975	1154	1082	1107	1190	1147	1127

	2022		
Age Group	**Jan**	**Feb**	**Mar**
<30 years	1132	1184	1373
30-39 years	1494	1699	1982
40-49 years	933	943	1119
50-59 years	764	791	842
60+ years	1210	1121	1206

Figure S.5 HIV viral load tests among people living with HIV by race/ethnicity, January 2020 - February 2022, San Francisco S-5

	2020											
Race/Ethnicity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
White	2159	1768	1382	910	1421	1969	1622	1494	1662	1761	1370	1429
Latinx	922	748	652	451	558	808	737	675	756	775	630	680
Black/African American	638	504	443	302	419	508	515	436	522	483	424	481
Asian/Pacific Islander	233	196	149	99	134	233	188	162	193	195	159	199

	2021											
Race/Ethnicity	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
White	1531	1664	1887	1724	1467	1683	1601	1566	1721	1680	1614	1493
Latinx	710	769	838	807	658	750	743	757	785	716	724	667
Black/African American	450	452	600	513	452	519	453	452	453	490	447	430
Asian/Pacific Islander	185	194	206	225	210	176	203	196	199	170	205	185

	2022	
Race/Ethnicity	**Jan**	**Feb**
White	1465	1560
Latinx	706	725
Black/African American	453	442
Asian/Pacific Islander	184	185

Figure 1.1 HIV disease stage 3 (AIDS) diagnoses, deaths, and prevalence, 1980-2021, San Francisco 2

Year	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
HIV disease stage 3 diagnoses	3	26	99	274	557	859	1236	1636	1762	2158
HIV disease stage 3 deaths	0	8	32	111	273	534	807	878	1038	1278
People living with HIV ever classified as stage 3	3	21	88	251	535	860	1289	2047	2771	3651

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
HIV disease stage 3 diagnoses	2043	2284	2323	2061	1773	1548	1063	793	682	574
HIV disease stage 3 deaths	1363	1512	1640	1603	1600	1485	992	424	401	353
People living with HIV ever classified as stage 3	4331	5103	5786	6244	6417	6480	6551	6920	7201	7422

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
HIV disease stage 3 diagnoses	552	505	478	543	476	475	451	443	434	324
HIV disease stage 3 deaths	349	324	320	293	300	308	287	269	227	208
People living with HIV ever classified as stage 3	7625	7806	7964	8214	8390	8557	8721	8895	9102	9218

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
HIV disease stage 3 diagnoses	301	252	244	189	139	126	97	131	114	111
HIV disease stage 3 deaths	193	190	181	191	188	203	184	202	208	192
People living with HIV ever classified as stage 3	9326	9388	9451	9449	9400	9323	9236	9165	9071	8990

Year	2020	2021
HIV disease stage 3 diagnoses	86	87
HIV disease stage 3 deaths	207	197
People living with HIV ever classified as stage 3	8869	8759

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	227	180	134	121	91	82	60	59	40	53
Black/African American	52	47	33	44	33	39	41	29	27	26
Latinx	117	111	94	78	71	73	84	56	53	60
Asian/Pacific Islander	52	48	45	36	38	31	20	21	15	15
Other/Unknown	26	17	16	20	7	15	7	8	3	6

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	116	88	63	57	41	37	28	25	15	23
Black/African American	149	162	129	129	91	117	135	88	84	77
Latino	154	152	121	97	83	89	101	62	62	65
Asian/Pacific Islander	40	32	33	26	27	21	13	15	10	8

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	3	5	4	5	4	3	1	2	4	3
Black/African American	39	26	4	35	43	43	35	22	22	13
Latina	19	8	7	11	8	9	8	6	5	14
Asian/Pacific Islander	0	1	0	1	1	2	1	1	1	2

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
MSM	353	300	236	219	162	145	133	110	85	79
PWID	14	11	14	6	9	16	20	7	5	9
MSM-PWID	51	49	38	27	24	30	25	15	14	22
Heterosexual	10	7	7	7	7	6	4	4	3	5
Unknown	7	3	2	3	3	10	4	8	5	9

Figure 2.5 Number of cis women newly diagnosed with HIV by transmission category, 2012-2021, San Francisco 13

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
PWID	7	10	10	11	11	10	6	5	9	9
Heterosexual	18	9	3	15	10	10	7	5	5	5
Unknown	2	2	0	3	4	7	4	4	4	9

Figure 3.7 Trends in median time from HIV diagnosis to viral suppression by race/ethnicity, transmission category, and housing status, 2016-2020, San Francisco 29

	2016	2017	2018	2019	2020
Overall	67	68	46	41	46

	2016	2017	2018	2019	2020
White	82	62	52	51	46
Black/African American	66	111	47	43	61
Latinx	59	73	43	37	37
Asian/Pacific Islander	49	43	25	39	60

	2016	2017	2018	2019	2020
MSM	68	60	41	40	37
PWID	86	202	146	65	55
MSM-PWID	77	198	59	41	77
Heterosexual	44	64	35	38	67

	2016	2017	2018	2019	2020
Homeless	77	74	71	40	67
Non-Homeless	65	64	42	41	43

Figure 3.9 Trends in mean percent time spent >200 copies/mL during the 12 months after HIV diagnosis by race/ethnicity, transmission category, and housing status, 2016-2020, San Francisco 31

	2016	2017	2018	2019	2020
Overall	28%	33%	29%	30%	31%

	2016	2017	2018	2019	2020
White	34%	32%	32%	35%	32%
Black/African American	24%	43%	31%	39%	29%
Latinx	29%	32%	27%	22%	27%
Asian/Pacific Islander	20%	24%	16%	24%	41%

	2016	2017	2018	2019	2020
MSM	26%	26%	22%	24%	23%
PWID	37%	65%	60%	50%	53%
MSM-PWID	41%	55%	33%	57%	53%

	2016	2017	2018	2019	2020
Homeless	32%	58%	47%	44%	62%
Non-Homeless	28%	30%	24%	26%	25%

Figure 5.1 Age-adjusted mortality rates among people aged 18 and older with HIV per 100,000 by gender and race/ethnicity, 2011-2020, San Francisco 42

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
White cis men	77	86	83	81	83	79	89	75	80	94
Black/African American cis men	177	154	138	146	164	142	144	199	150	183
Latino cis men	63	62	76	65	58	43	63	81	89	61
White cis women	2	6	6	3	6	5	5	6	5	5
Black/African American cis women	54	47	75	61	56	70	41	60	52	22
Latina cis women	5	3	13	8	7	16	10	5	3	11
Trans women (not age-adjusted)	N/A	N/A	N/A	N/A	N/A	N/A	290	161	161	322

Figure 6.2 Trends in health insurance status at time of HIV diagnosis by race/ethnicity, 2017-2021, San Francisco 53

White	2017	2018	2019	2020	2021
Public	35%	37%	36%	48%	43%
Private	41%	38%	25%	35%	28%
None	20%	17%	31%	15%	23%
Missing	4%	8%	8%	3%	6%

Black/ African American	2017	2018	2019	2020	2021
Public	51%	51%	62%	44%	62%
Private	18%	34%	21%	15%	27%
None	15%	10%	17%	26%	12%
Missing	15%	5%	0%	15%	0%

Latinx	2017	2018	2019	2020	2021
Public	38%	46%	27%	45%	45%
Private	25%	20%	27%	15%	18%
None	21%	21%	32%	38%	30%
Missing	16%	12%	14%	2%	7%

Asian/ Pacific Islander	2017	2018	2019	2020	2021
Public	6%	30%	10%	27%	40%
Private	39%	30%	76%	33%	20%
None	35%	30%	5%	40%	27%
Missing	19%	10%	10%	0%	13%

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	210	162	119	106	79	65	49	44	25	40
Black/African American	29	33	25	28	18	20	24	15	16	10
Latino	96	100	76	66	52	55	64	43	42	43
Asian/Pacific Islander	46	41	41	33	32	24	18	18	14	8
Other	23	13	13	13	5	11	3	5	2	0

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Male Rectal Gonorrhea (HIV+)	299	327	297	401	429	475	437	355	353	421
Male Rectal Gonorrhea (HIV-)	445	434	511	688	875	1013	1048	1028	668	1109
Male Gonococcal Proctitis (HIV+)	10	14	16	21	20	20	19	14	25	16
Male Gonococcal Proctitis (HIV-)	14	19	21	20	49	38	33	39	25	48

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Early syphilis (HIV+)	541	551	552	565	514	588	498	453	400	416
Early syphilis (HIV-)	222	290	312	368	394	517	481	505	394	324
Primary (HIV+)	89	88	75	85	89	94	75	57	60	48
Primary (HIV-)	71	97	81	107	115	128	133	105	85	62
Secondary (HIV+)	188	161	149	143	127	130	87	74	73	66
Secondary (HIV-)	86	79	96	83	110	140	123	124	100	52
Early Latent (HIV+)	264	302	328	337	298	364	336	322	267	302
Early Latent (HIV-)	65	114	135	178	169	249	225	276	209	210

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	5	11	10	8	7	10	10	8	9	8
Black/African American	7	6	4	2	7	9	8	1	3	4
Latinx	5	2	8	2	3	5	6	3	3	1
Other/Unknown	4	2	2	5	4	2	3	0	0	6

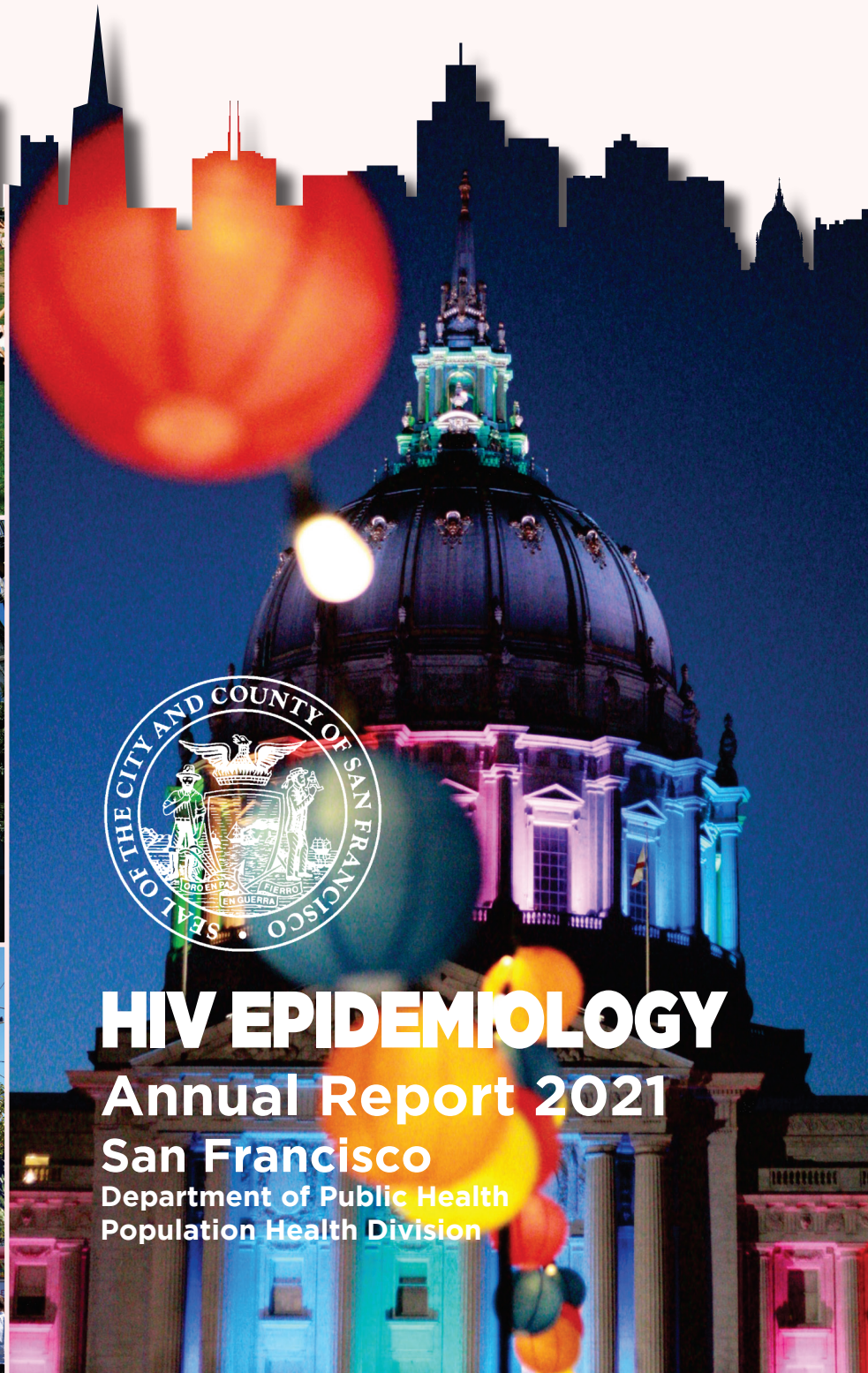
Age in years	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
13-24 years	2	2	1	0	2	1	2	0	0	0
25-29 years	1	1	2	5	3	0	1	0	1	8
30-39 years	3	1	5	5	7	8	7	7	5	3
40-49 years	10	9	5	4	4	9	8	4	2	7
50+ years	5	8	11	3	5	8	9	1	7	1

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	7	4	2	5	3	3	0	0	3	1
Black/African American	8	4	2	8	4	4	7	6	1	3
Latinx	10	6	3	5	7	5	4	2	3	5
Other/Unknown	3	2	3	4	3	4	0	1	1	1

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	5	8	7	8	7	5	2	3	8	5
Black/African American	9	6	1	8	10	10	8	5	5	3
Latina	11	5	4	7	5	6	5	4	3	9
Other/Unknown	2	2	1	6	3	6	2	2	2	6

Map 17 Geographic distribution of people with HIV 88

	Map 17.1	Map 17.2	Map 17.3	Map 17.4	Map 17.5
Neighborhood	Number of PLWH	HIV prevalence per 100,000	Two-year rate of new diagnoses per 100,000	HIV mortality rate per 100,000	Percent of PLWH virally suppressed
Bayview	365	1017	47	14	76%
Bernal Heights	234	1000	4	9	75%
Castro	1704	7164	84	88	76%
Diamond Heights	278	1663	18	48	77%
Downtown	651	948	22	13	72%
Excelsior	282	586	23	0	72%
Haight Ashbury	298	1410	9	24	76%
Ingleside	107	669	56	0	78%
Lake Merced	106	637	18	6	86%
Mission	1141	1991	44	17	73%
Nob Hill	278	1521	38	11	68%
Noe Valley	233	1884	40	0	74%
Outer Mission	175	603	17	3	76%
Pacific Heights	303	587	4	15	72%
Potrero Hill	200	1651	41	8	73%
Presidio	14	433	0	0	79%
Richmond	406	441	14	1	75%
South Of Market	805	4052	106	116	72%
Sunset	282	317	7	2	72%
Tenderloin	1505	3836	99	102	67%
Treasure Island	41	1424	0	0	65%
Twin Peaks	350	838	10	17	79%
Visitacion Valley	134	528	0	8	66%
Western Addition	1203	2971	25	54	78%
Homeless	308	N/A	N/A	N/A	27%
Unknown	425	N/A	N/A	N/A	43%



SEAL OF THE CITY AND COUNTY OF SAN FRANCISCO
ORO EN PAZ
FIERRO
EN GUERRA

HIV EPIDEMIOLOGY

Annual Report 2021

San Francisco

Department of Public Health
Population Health Division